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BOARD OF PATENT APPEALS AND INTERFERENCES

In re the Application of

Group Art Unit: 3772

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FOR: Cheek Path Airway and Cheek Pouch Anchor

APPELLANT'S OPENING BRIEF

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- ***to compress as a user's jaws close***, and
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APPELLANT'S OPENING BRIEF

(I) REAL PARTY IN INTEREST. The sole real party in interest is Applicant Lowell R. Wedemeyer.

(ii) RELATED APPEALS AND INTERFERENCES. There are no pending related appeals or interferences. However, after an appeal conference on an Appeal Brief filed in this application on 7/7/2008, the Office found Applicant's arguments to be persuasive and re-opened prosecution.

(iii) STATUS OF CLAIMS.

Claims 1 through 46 have been stated in the application.

Claims 1 - 32 have been withdrawn from consideration pursuant to the election required in the First Office Action.

Claims 33 - 46 remain pending in this application.

Claims 33 - 46 have been finally rejected in the Office Action mailed January 4, 2010.

(iv) STATUS OF AMENDMENTS.

Applicant filed original claims 1 - 38.

Applicant filed preliminary amendments on April 22, 2004, which have been entered.

Pursuant to the election requirement imposed by the Examiner, Applicant elected claims 33 - 38 and withdrew from consideration claims 1 - 32.

Applicant added new claims 39 and 40 and a substitute specification by amendment filed May 18, 2007. They have been entered.

Applicant filed new claims 41 - 43 by amendment together with a request for further examination on September 12, 2007. They have been entered.

Applicant filed new claims 44-46 by amendment on September 25, 2009. They have been entered.

Claims 33 - 46 remain pending in this application.

(v) SUMMARY OF CLAIMED MATTER.

The Cheek Pouch Anchor. The "cheek pouch anchor" is claimed in independent claims 33, 41 and 46. The cheek pouch anchor is a spring element formed of a resilient filament coiled into a plurality of loops. See Specification, Figures 1 and 2, elements 28, 28a, 28b, 28c, 28d, 29 and 29a. [Note 1]

Applicant created and specially defined in the Specification an anatomical term "user's cheek pouch" to help define the structure and function of the invention in the claims. A "user's cheek pouch," within which a cheek pouch anchor must operate, lies between a user's inner cheek wall and the cheek-adjacent surfaces of a user's dental arches, teeth and gums. Specification ¶ [0041] and Figure 3, dotted line 50. Please note that the biting ("occlusal") surfaces of a user's teeth **by definition** are beyond the limits of a "user's cheek pouch". Also beyond those limits are the lingual and interstitial surfaces of the user's teeth and the occlusal surfaces of a user's lips. The cheek pouch anchor is structured to avoid the biting surfaces of a user's teeth as well as the user's tongue and lips. See Figure 3, element 50, defined in Applicant's specification, paragraph. [0031], p. 9, lines 14 - 19. [Note 2]

Applicant carefully limited his special anatomical definition in his Specification of a "user's cheek pouch" precisely because that is the environment within which the cheek pouch anchor is structured to fit and operate. The cheek pouch anchor stabilizes itself within a user's cheek pouch **with no attachment to teeth. The cheek pouch anchor is structured to allow a user's jaws and teeth to open and close, and a user's tongue to move, with no interference by the cheek pouch anchor while the anchor dwells within the user's cheek pouch.** The cheek pouch anchor is structured to compress under the relatively weaker forces imposable by soft tissues of the cheek pouch, but **not** retract a patient's jaws open and **not**

1 All references herein are to the substitute specification filed May 18, 2007, which includes the paragraph numbering inserted by the PTO for publication of the original application.

2 The Examiner contradicts this critical, special definition in Applicant's Specification ¶ [0041] of the anatomical limits of a "user's cheek pouch." This error fatally infects all final rejections.

force changes in a user's teeth, jaws or palate. [Note 3]

Applicant structures a resilient filament 28 into a plurality of loops, sized to fit within a user's cheek pouch. The cheek pouch anchor dynamically maintains a span across the gap between a user's upper and lower teeth as the user's jaws open and close. See figure 3. Similarly, the anchor maintains a span across the gap between a user's lips as the lips open and close. See figure 3.

Consequently, the cheek pouch anchor maintains its position within the user's cheek pouch, resists slipping between biting surfaces of the user's teeth, slipping out of the user's mouth between the user's lips, or slipping into the user's throat. The anchor is sized to fit within one of a user's two cheek pouches. It has the structural strength to maintain itself within that cheek pouch with a work piece attached while the user's jaws and lips are free to open and close and without interfering with the user's tongue. See Figures 2, 3; Specification para. [0031]; claims 33, 34, and 41.

The cheek pouch anchor actually is part of Applicant's solution to larger problems concerning the stabilization of "cheek-side" airways that are intended to dwell within a user's mouth. The devices of Nelson (U.S. Patents 4,170,230, 4,261,354, 4,262,666, and 4,289,172), that Applicant believes are most closely related prior art, are stabilized cheek-side airways which have these problems. See Applicant's Specification paragraphs [0018] - [0020], [0054] and [0058] - [0064]. The anchor solution unexpectedly turned out to have additional capabilities and applications. See claims 36 - 40, 42 and 43.

Applicant's cheek pouch anchor, both separately and in combination with other elements, is summarized in the specification at paragraphs [0030] - [0034], [0049], and [0050]. The numbered elements of the cheek pouch anchor are listed in specification paragraphs [0140] - [0147]. The anchor is illustrated in figures 1, 2, 3, and 5. Detailed descriptions of the

3 In the first appeal in this application, the Examiner conceded that he had erred by insisting that the dental retractor of Leal (U.S. Patent 5,199,872) was anticipating art. Leal stated that his device prevented the closing of a patient's jaws. Leal's device also was incapable of fitting "within" one of a user's cheek pouches, but necessarily had to fit "into" both cheek pouches and had elements that extended outside of both cheek pouches.

figures are at specification paragraphs [0192] - [0194] and [0196]. Relevant anatomical definitions used in the claims are at specification paragraphs [0036] - [0044]. Definitions of some words used in the claims appear at specification paragraphs [0222] - [0228].

The term "user's cheek pouch" is defined in paragraph [0041] of the specification as follows:

"User's cheek pouch" lies between the inner wall of one of such user's two cheeks and the cheek-adjacent side of such user's dental arches, gums and teeth. A user's cheek pouch extends along such user's anterior-posterior ("vertical") body axis between the junctures of such user's mandibular and maxillary dental arches with such user's inner cheek wall. Such cheek pouch extends along such user's dorsal-ventral body axis approximately from a user's front teeth to the general area of such user's most-dorsal teeth and rear-jaw gap. The configuration of a user's cheek pouch dynamically alters as the user's jaws and lips open and close. A user has two cheek pouches located on opposing sides of a user's mouth." [Note 4]

See the dotted outline of a user's cheek pouch which is element 50 in Figure 3, described at specification paragraph [0176].

The cheek pouch anchor is structured, depicted and claimed "to allow a user's jaws and lips to fully close while said spring element is within a user's cheek pouch." Figure 3; Claims 39 and 40, substitute specification page 34, lines 10 - 11 and page 35, lines 9 - 10; and Claims 41 and 43 in the Request for Further Examination filed September 12, 2007, pages 17 - 18. When emplaced within a user's cheek pouch, as in figure 3, the cheek pouch anchor does not encumber the opening and closing of a user's lips. Thus, the emplaced anchor does not aggravate the lip-sealing problems of airways that are described in Specification paragraphs [0065] - [0066]. See also the list of objectives and features in Specification paragraphs [0070] - [0075].

4 The phrase "user's cheek pouch" is explicitly defined in the singular, with a notation that a user has two cheek pouches. This explicitly defined term then is used in the claims. The conventional open-ended interpretation of the phrase "a user's cheek pouch" in patent parlance is discussed in detail later in this brief.

Adjustability of the Cheek Pouch Anchor.

In claims 36 and 39 the size of the anchor as a whole can be adjusted for different sized mouths. It is an objective of the invention that lay persons be capable of inserting, adjusting, using and removing it by themselves, and adjusting it for a particular user's comfort. Specification ¶¶ [0079] - [0080]. The mechanism of adjustability is explained by reference to figure 1 at specification paragraph [0192], page 21, lines 21 - 24. In claim 36 the whole anchor can be adjusted by mutually converse adjustments of two or more of the plurality of loops from which the whole anchor is formed. Claim 39 requires adjustment of the loop span of at least one of the plurality of loops, relative to the loop span of at least one other loop, to translate into adjustment of the span size of the whole spring element.

The Cheek Pouch Anchor Combined With Additional Elements.

Applicant also claims a combination of the cheek pouch anchor with two distinct types of additional elements.

Claims 35, 42 and 45 combine the elements of the cheek pouch anchor with a conduit for a fluid that Applicant calls a "cheek path airway." See Figure 2, elements 1 - 6. The cheek path airway is shaped to carry air or other fluids in either direction along a "cheek path." The "cheek path" traverses between a user's lips, through a user's cheek pouch, curves through a user's "rear-jaw gap" behind a user's rear-most teeth, and reaches into the airspace above a user's tongue at the rear of a user's mouth. See Figure 3. The cheek path airway attaches to the cheek pouch anchor and is stabilized within a user's mouth by the anchor while the user's jaws and teeth remain free to open and close.

Claims 38, 40, 43 and 44 combine the elements of the cheek pouch anchor with a capacity to carry a substance and release that substance within a user's mouth.

Claim 46 is the only means-plus-function claim in the application.

APPEALED CLAIMS MAPPED TO SPECIFICATION

CLAIM ON APPEAL

Independent Claim 33: (Original)
A cheek pouch anchor, for placement within a user's cheek pouch to maintain positioning of a work piece in a user's mouth while a user's jaws, inter occlusal space, and lips open and close, comprising:

A spring element adapted

- to be placed within a user's cheek pouch, and

- to compress as a user's jaws close, and

- to resiliently expand so as to form and maintain a span bridging across a user's inter occlusal space and a user's lip opening formed as a user's jaws and lips open and close, and

- to receive joiner to a work piece, and

MAPPING TO SPECIFICATION

(Substitute Specification, clean version, filed May 18, 2007, "Spec.")

"User's cheek pouch" is defined at Spec. ¶ [0041] and illustrated as dotted line 50 in Figure 3, as explained at Spec. ¶ [0194].

The occlusal (biting) surface of a user's tooth is illustrated as element 43 in Figure 9, and listed at Spec. ¶ [0168].

Inter occlusal space referenced in Spec. ¶ [0063].

Spring element described, Spec. ¶ [0030], [0064], p. 12, l. 15 - 22; Figures 1 and 2, elements 28, 28a, 28b, 28c, and 28d. See also Spec. ¶ [0085] - [0087], [0140] - [0147], [0192] - [0194], [0219].

Placement "within" a user's cheek pouch is described, Spec. ¶ [0030], [0064], p. 12, l. 15 - 22; Figure 3, dotted line 50, Spec. ¶ [0176], and spring elements 28 - 28d, Spec. ¶ [0140] - [0145];

Compression as user's jaws close is described in Spec. ¶ [0030], [0063], [0064], [0072]; and Fig. 3, (showing spring element 28 compressed within user's cheek pouch 50).

Resilient expansion is described in Spec. ¶ [0030], [0063], [0064]; see Fig. 1, elements 28, 28a, 28b, 28c, and 28d, identified at Spec. ¶ [0140] - [0145], and described at Spec. ¶ [0192], p. 21, lines 16 - 19.

Joiner to a work piece is described in Spec. ¶ [0031]; Spring element is slidably attached to a work piece (a cheek path airway), as illustrated in Figs. 1, 2 and 3, Spec. ¶ [0085] - [0087], [0192] - [0194], especially Spec. ¶ [0192], p. 21, l. 16 - 19; p. 22, lines 3 - 6, and "lacing holes", element 17, Spec. ¶ [0128], [0217].

having structural strength sufficient, when joined to a work piece, to maintain placement within a user's cheek pouch while a user's lips and jaws open and close.
[end of claim 33]

CLAIM ON APPEAL

Dependent Claim 34: (Original)
The cheek pouch anchor of claim 33 wherein said spring element is formed of at least one of the following:

metal,
plastic,
resilient monofilament
plastic line.

CLAIM ON APPEAL

Dependent Claim 35: (Original)
The cheek pouch anchor of claim 33 further comprising:

said cheek pouch anchor is joined with a conduit for a fluid, which conduit is adapted for placement at least partially in a user's cheek pouch.

CLAIM ON APPEAL

Anchor placement and operation are described in Spec. ¶ [0029] - [0031], [0034], [0060], [0064], [0218], [0219], and Fig. 3, described in Spec. ¶ [0194]. This "structural strength" phrase appeared in this original claim 33 as filed with the original patent application.

MAPPING TO SPECIFICATION

Spec. ¶ [0219]; These three items appeared in original claim 34 as filed in the original application. The specification has been amended to include "metal" at Spec. ¶ [0219], p. 29, lines 26 - 27.

MAPPING TO SPECIFICATION

"Conduit" is defined at Spec. ¶ [0222] - [0224]. Spec. ¶ [0031]; the spring element is slidably attached to a cheek path airway, as illustrated in Figs. 1, 2 and 3, Spec. ¶ [0085] - [0087], [0192] - [0194], especially Spec. ¶ [0192], p. 21, l. 16 - 19; p. 22, lines 3 - 6, and "lacing holes", element 17, Spec. ¶ [0128], [0217]. The cheek path airway is a "conduit for a fluid", to wit, "air" as specially defined at Spec. ¶ [0044].

MAPPING TO SPECIFICATION

Dependent Claim 36: (Original) The cheek pouch anchor of claim 33 wherein said spring element comprises:

a resilient filament

- which is configured into a plurality of connected loops, each loop having a loop span size, and

-said plurality of loops are combined to form a whole spring element with a whole spring element span size, and

- each one of said plurality of loop span sizes is mutually adjustable relative to at least one other of said loop span sizes, such that an increase or decrease in the loop span size of any one of said plurality of loops results in a converse decrease or increase in the loop span size of at least one other of said plurality of loops, thereby enabling adjustment of said whole spring element span size by said mutual adjustment within said plurality of loop span sizes.
[end of claim 36]

CLAIM ON APPEAL

Dependent Claim 37: (Original)
The cheek pouch anchor of claim 33, improved to dispense a substance within a user's mouth, wherein said spring element is adapted to receive impregnation or coating with a substance which is to be released in a user's mouth.

"Filament" is defined at Spec. ¶ [0226]; resilience specified at Spec. ¶ [0030], p. 6, l. 7 - 12; Spec. ¶ [0064]

Plurality of loops, each with loop span size, illustrated in Figs. 1, 2, 3, loop elements, 28a - 28d, described at Spec. ¶ [0192], p. 21, lines 16 - 20;

The whole spring element is 28 in Figs. 1, 2 and 3, with whole spring element span size. See also Spec. ¶ [0063], [0064].

This mechanism of adjustability is explained at Spec. ¶ [0192], p. 21, lines 21 - 24, by reference to Fig. 1. See also objectives of the invention, Spec. ¶ [0079], [0080].

NOTE: A second mode of adjustment, by altering the location of lacing holes 17 in portion 3 of the airway tube to alter the curves in the cheek pouch anchor, is disclosed at Spec. ¶ [0219], p. 29, lines 25 - 26. This second mode does not necessarily involve "converse decrease or increase" of one loop span size relative to another loop span size.

MAPPING TO SPECIFICATION

For impregnation or coating with substance to be released in user's mouth, see Spec. ¶ [0032].

CLAIM ON APPEAL

Independent Claim 38: (Original) A cheek pouch anchor, for placement within a user's cheek pouch, comprising:

A spring element adapted

- to be placed within a user's cheek pouch, and

- to compress as a user's jaws close, and

- to resiliently expand so as to form and maintain a span
--- bridging across such user's inter occlusal space as such user's jaws open, and

--- bridging across such user's lip opening formed as such user's lips open, and

- to receive impregnation or coating with a substance which is to be released within such user's mouth,

whereby said spring element is enabled to maintain its placement within a user's cheek pouch and to release such substance while such user's lips and jaws remain free to

MAPPING TO SPECIFICATION

"User's cheek pouch" is defined at Spec. ¶ [0041] and illustrated as dotted line 50 in Figure 3, as explained at Spec. ¶ [0194].

Spring element disclosed at Spec. ¶ [0030], [0064], p. 12, l. 15 - 22; Figures 1 and 2, elements 28, 28a, 28b, 28c, and 28d, Spec. ¶ [0085] - [0087], [0140] - [0145], [0192] - [0194], [0219].

Spring element placed within a user's cheek pouch, Spec. ¶ [0030], [0064], p. 12, l. 15 - 22; Figure 3, dotted line 50, Spec. ¶ [0176], and spring elements 28 - 28d, Spec. ¶ [0140] - [0145];

Compression as user's jaws close is described in Spec. ¶ [0030], [0063], [0064], [0072]; Spec. ¶ [0030], [0063], [0064]; and Fig. 3, (showing spring element 28 compressed within user's cheek pouch 50).

Resilient expansion is described at Spec. ¶ [0030], [0063], [0064]; See Fig. 1, elements 28, 28a, 28b, 28c, and 28d, identified at Spec. ¶ [0140] - [0145], and described at Spec. ¶ [0192], p. 21, lines 16 - 19.

Inter occlusal space is described at Spec. ¶ [0063].

Spring element 28 is illustrated within user's cheek pouch 50, relative to user's upper and lower lips 31 and 32, in Fig. 3, described at Spec. ¶ [0194].

Impregnation or coating with substance to be released in user's mouth is described at Spec. ¶ [0032].

This "whereby" phrase was in this original claim 38 as filed in the original application.

open and close. [end of claim 38]

CLAIM ON APPEAL

Independent Claim 39. (Added by amendment, May 17, 2007) An adjustable cheek pouch anchor, for placement within a user's cheek pouch to maintain positioning of a work piece in a user's mouth while a user's jaws, inter occlusal space, and lips open and close, comprising:

a spring element formed of a resilient filament

sized to fit within a user's cheek pouch, and

having a dynamic span that is resiliently expandable within a user's cheek pouch to maintain a bridge across a user's inter occlusal space and lip opening that form as a user's jaws open, and that is flexibly compressible to allow a user's jaws and lips to fully close while said spring element is within a user's cheek pouch, and

capable of receiving attachment of a work piece, and

MAPPING TO SPECIFICATION

"User's cheek pouch" is defined at Spec. ¶ [0041] and illustrated as dotted line 50 in Figure 3, as explained at Spec. ¶ [0194].

Spring element disclosed at Spec. ¶ [0030], [0064], p. 12, l. 15 - 22; Figures 1 and 2, elements 28, 28a, 28b, 28c, and 28d, Spec. ¶ [0085] - [0087], [0140] - [0147], [0192] - [0194], [0219].

Placement "within a user's cheek pouch" is described at Spec. ¶ [0030]; The spring element is illustrated when sized to fit within one of a user's cheek pouches, Spec. ¶ [0030], [0064], p. 12, l. 15 - 22; Figure 3, dotted line 50, Spec. ¶ [0176], and spring elements 28 - 28d, Spec. ¶ [0140] - [0145];

Dynamic span is described, Spec. ¶ [0063], [0064], [0072], [0176].

Resiliently expandable and compressible within a user's cheek pouch, described at Spec. ¶ [0030], [0063], [0064]; and Fig. 3, (showing spring element 28 compressed within user's cheek pouch 50 with jaws and lips closed, except for airway projecting through lips). See Spec. ¶ [0065] - [0068] concerning lip-sealing around airway.

Spanning across the user's Inter occlusal space is described at Spec. ¶ [0063], [0064].

Spring element 28 within user's cheek pouch 50, is illustrated relative to user's closed jaws and closed upper and lower lips 31 and 32, in Fig. 3, described at Spec. ¶ [0194].

Joinder to a work piece is described at Spec. ¶ [0029] and [0031], and illustrated in Figs. 1 and 2,

having structural strength that is sufficient for said spring element to maintain itself, with a work piece attached to it, within a user's cheek pouch while a user's jaws open and close; and

said resilient filament

is configured into a plurality of connected loops
each such loop
having a loop span size, and
each such loop span size having a range of expansion and compression, and
said plurality of connected loops form a whole spring element having a whole spring element span size, and

said whole spring element span size having a range of expansion and compression, and

said range of expansion and compression of least one of said loop span sizes of said plurality of connected loops is adjustable relative to at least one other of said loop span sizes, and

said connected loops

wherein the work piece is a cheek path airway, drawing elements 1 - 5, further described at Spec. ¶ [0192]. The "cheek path airway" is described at Spec. ¶ [0023] - [0026].

Anchor placement and operation are described in Spec. ¶ [0029] - [0031], [0034], [0060], [0064], [0218], [0219], and Fig. 3, described Spec. ¶ [0194]. This "structural strength" phrase appeared in original claim 33 as filed with the original patent application.

"Filament" is defined at Spec. ¶ [0226]; resilience specified at Spec. ¶ [0030], p. 6, l. 7 - 12; Spec. ¶ [0064]

A plurality of loops, each with loop span size, is illustrated in Figs. 1, 2, 3, loop elements, 28a - 28d, described at Spec. ¶ [0192], p. 21, lines 16 - 20;

The whole spring element is 28 in Figs. 1, 2 and 3, with whole spring element span size. See also Spec. ¶ [0063], [0064].

For range of expansion and compression, see Spec. ¶ [0030], [0063], [0064].

A mechanism of adjustability is explained at Spec. ¶ [0192], p. 21, lines 21 - 24, by reference to Fig. 1. See also objectives of the invention, Spec. ¶ [0079], [0080].

translate an adjustment in said range of expansion and compression of the loop span size of at least one of said plurality of connected loops into an adjustment in said range of expansion and compression of said whole spring element span size.

[end of claim 39]

CLAIM ON APPEAL

Independent Claim 40. (Added by amendment May 17, 2007.) A cheek pouch anchor, for placement within a user's cheek pouch and releasing a substance in a user's mouth, comprising:

A spring element

sized to fit within a user's cheek pouch, and

having a dynamic span that is resiliently expandable within a user's cheek pouch to maintain a bridge across a user's inter occlusal space and lip opening that form as a user's jaws open, and that is flexibly compressible to allow a user's jaws and lips to fully close while said spring element is

A second mode of adjustment, by altering the location of lacing holes 17 in portion 3 of the airway tube to alter the curves in the cheek pouch anchor, is disclosed at Spec. ¶ [0219], p. 29, lines 25 - 26.

MAPPING TO SPECIFICATION

"User's cheek pouch" is defined at Spec. ¶ [0041] and illustrated as dotted line 50 in Figure 3, as explained at Spec. ¶ [0194].

Spring element disclosed at Spec. ¶ [0030], [0064], p. 12, l. 15 - 22; Figures 1 and 2, elements 28, 28a, 28b, 28c, and 28d.. Spec. ¶[0085] - [0087], [0140] - [0147], [0192] - [0194], [0219].

Placement "within a user's cheek pouch" is described at Spec. ¶ [0030]; The spring element is illustrated when sized to fit within one of a user's cheek pouches, Spec. ¶ [0030], [0064], p. 12, l. 15 - 22; Figure 3, dotted line 50, Spec. ¶ [0176], and spring elements 28 - 28d, Spec. ¶ [0140] - [0145];

Dynamic span is described, Spec. ¶ [0063], [0064], [0072], [0176].

Resiliently expandable and compressible within a user's cheek pouch, described at Spec. ¶ [0030], [0063], [0064]; and Fig. 3, (showing spring element 28 compressed within user's cheek pouch 50 with jaws and lips closed, except for airway projecting through lips). See Spec. ¶ [0065] - [0068] projecting through lips). See Spec. ¶ [0065] - [0068] concerning lip-sealing a

Spanning across the user's Inter occlusal space is described at Spec. ¶ [0063], [0064].

within a user's cheek pouch, and

having the capability to carry a substance, and

having structural strength that is sufficient for said spring element, while carrying the substance, to maintain itself within a user's cheek pouch while a user's jaws open and close, and having the capability to release the some portion of the substance into the user's mouth.

[end of claim 40]

CLAIM ON APPEAL

Independent Claim 41. (Added by amendment Sept. 12, 2007). A cheek pouch anchor, for placement within a user's cheek pouch to stabilize a work piece in a user's mouth, comprising:
A spring element

sized to fit within one of a user's cheek pouches, and

having a dynamic span such that
said spring element resiliently expands within one or more of

Spring element 28 within user's cheek pouch 50, is illustrated relative to user's upper and lower lips 31 and 32, in Fig. 3, described at Spec. ¶ [0194].

Capability to carry a substance described, Spec. ¶ [0032].

Anchor placement and operation are described in Spec. ¶ [0029] - [0031], [0034], [0060], [0064], [0218], [0219], and Fig. 3, described Spec. ¶ [0194]. This "structural strength" phrase appeared in original claim 33 as filed with the original patent application.

Release of a substance in the user's mouth described at Spec. ¶ [0032].

MAPPING TO SPECIFICATION

"User's cheek pouch" is defined at Spec. ¶ [0041] and illustrated as dotted line 50 in Figure 3, as explained at Spec. ¶ [0194].

Spring element disclosed at Spec. ¶ [0030], [0064], p. 12, l. 15 - 22; Figures 1 and 2, elements 28, 28a, 28b, 28c, and 28d..
Spec. ¶ [0085] - [0087], [0140] - [0147], [0192] - [0194], [0219].

Placement "within a user's cheek pouch" is described at Spec. ¶ [0030], [0064], p. 12, l. 15 - 22. The spring element is illustrated when sized to fit within one of a user's cheek pouches, Figure 3, dotted line 50, Spec. ¶ [0176], and spring elements 28 - 28d, Spec. ¶ [0140] - [0145];

Dynamic span is described, Spec. ¶ [0063], [0064], [0072], [0176].

Resiliently expandable and compressible within a user's cheek pouch, described at Spec. ¶ [0030],

a user's cheek pouches to maintain a bridge across a user's inter occlusal space and lip opening that form as a user's jaws open, and said spring element flexibly compresses to allow a user's jaws and lips to fully close while said spring element is within one or more of a user's cheek pouches, and having the capability to receive attachment to a work piece, and

having structural strength that is sufficient for said spring element, with a work piece attached, to maintain itself within one or more of a user's cheek pouches while a user's jaws open and close.

[end of claim 41]

CLAIM ON APPEAL

Dependent Claim 42. (Added by amendment Sept. 12, 2007). A cheek pouch anchor as in claim 41, further comprising:

said cheek pouch anchor is joined with a conduit for a fluid, which conduit is configured to enable placement of it at least partially in one or more of a

[0063], [0064]; and Fig. 3, (showing spring element 28 compressed within user's cheek pouch 50 with jaws and lips closed, except for airway projecting through lips). See Spec. ¶ [0065] - [0068] concerning lip-sealing around the airway.

Spanning across the user's Inter occlusal space is described at Spec. ¶ [0063], [0064].

Spring element 28 within user's cheek pouch 50, is illustrated relative to user's upper and lower lips 31 and 32, in Fig. 3, described at Spec. ¶ [0194].

Joinder to a work piece is described at Spec. ¶ [0029] and [0031], and illustrated in Figs. 1 and 2, wherein the work piece is a cheek path airway, drawing elements 1 - 5, further described at Spec. ¶ [0192]. The "cheek path airway" is described at Spec. ¶ [0023] - [0026].

Anchor placement and operation are described in Spec. ¶ [0029] - [0031], [0034], [0060], [0064], [0218], [0219], and Fig. 3, described Spec. ¶ [0194]. This "structural strength" phrase appeared in original claim 33 as filed with the original patent application.

MAPPING TO SPECIFICATION

user's cheek pouches.

"Conduit" is defined at Spec. ¶ [0222] - [0224].
Spec. ¶ [0031]; the spring element is slidably attached to a cheek path airway, as illustrated in Figs. 1, 2 and 3, Spec. ¶ [0085] - [0087], [0192] - [0194], especially Spec. ¶ [0192], p. 21, l. 16 - 19; p. 22, lines 3 - 6, and "lacing holes", element 17, Spec. ¶ [0128], [0217]. The cheek path airway is a "conduit for a fluid", to wit, "air" as specially defined at Spec. ¶ [0044].

CLAIM ON APPEAL

Independent Claim 43. (Added by amendment Sept. 12, 2007) A cheek pouch anchor, for placement within a user's cheek pouch and releasing a substance in a user's mouth, comprising:
A spring element

sized to fit within one of a user's cheek pouches, and

having a dynamic span such that

said spring element resiliently expands within one or more of a user's cheek pouches to maintain a bridge

MAPPING TO SPECIFICATION

"User's cheek pouch" is defined at Spec. ¶ [0041] and illustrated as dotted line 50 in Figure 3, as explained at Spec. ¶ [0194].

Spring element disclosed at Spec. ¶ [0030], [0064], p. 12, l. 15 - 22; Figures 1 and 2, elements 28, 28a, 28b, 28c, and 28d..
Spec. ¶ [0085] - [0087], [0140] - [0147], [0192] - [0194], [0219].

Placement "within a user's cheek pouch" is described at Spec. ¶ [0030], [0064], p. 12, l. 15 - 22. The spring element is illustrated when sized to fit within one of a user's cheek pouches, Figure 3, dotted line 50, Spec. ¶ [0176], and spring elements 28 - 28d, Spec. ¶ [0140] - [0145];

Dynamic span is described, Spec. ¶ [0063], [0064], [0072], [0176].

Resiliently expandable and compressible within a user's cheek pouch, described at Spec. ¶ [0030], [0063], [0064]; and Fig. 3, (showing spring element 28 compressed within user's cheek

across a user's inter occlusal space and lip opening that form as a user's jaws open, and said spring element flexibly compresses to allow a user's jaws and lips to fully close while said spring element is within one or more of a user's cheek pouches, and

having the capability to carry a substance, and

having structural strength that is sufficient for said spring element, while carrying the substance, to maintain itself within one or more of a user's cheek pouches while a user's jaws open and close, and having the capability to release a portion of the substance into the user's mouth.

[end of claim 43]

CLAIM ON APPEAL

Dependent Claim 44. (Added by amendment, September 25, 2009): The cheek pouch anchor of claim 33, improved to dispense a substance within a user's mouth, further comprising:

said spring element is joined with the substance which is to be released in a user's mouth.
[end of claim 44]

CLAIM ON APPEAL

Dependent Claim 45. (Added by

pouch 50 with jaws and lips closed, except for airway projecting through lips). See Spec. ¶ [0065] - [0068] concerning lip-sealing around the airway.

Spanning across the user's Inter occlusal space is described at Spec. ¶ [0063], [0064].

Spring element 28 within user's cheek pouch 50, is illustrated relative to user's upper and lower lips 31 and 32, in Fig. 3, described at Spec. ¶ [0194].

Capability to carry a substance described at Spec. ¶ [0032].

Anchor placement and operation are described in Spec. ¶ [0029] - [0031], [0034], [0060], [0064], [0218], [0219], and Fig. 3, described Spec. ¶ [0194]. This "structural strength" phrase appeared in original claim 33 as filed with the original patent application.

Release of a substance in the user's mouth described at Spec. ¶ [0032].

MAPPING TO SPECIFICATION

Capability to carry a substance described at Spec. ¶ [0032].

Release of a substance in the user's mouth described at Spec. ¶ [0032].

MAPPING TO SPECIFICATION

"User's cheek pouch" defined at Spec. [0041].

amendment, September 25, 2009)
The cheek pouch anchor of claim 35
further comprising:

said fluid conduit has a
conduit wall,

said conduit wall has at least
one hole, and

said cheek pouch anchor is
joined to said fluid conduit by lacing
the spring element of said cheek
pouch anchor through at least one
hole in said conduit wall.
[end of Claim 45]

CLAIM ON APPEAL

Independent Claim 46. (Added by
amendment on September 25, 2009)
A cheek pouch anchor for placement
within a user's cheek pouch to
maintain positioning of a work piece
in a user's mouth while a user's
jaws, inter occlusal space between a
user's teeth, and lips open and
close, comprising:

Spring means that fit wholly
within a user's cheek pouch, and

Joinder means that fit wholly
within such user's cheek pouch for
attaching a work piece to said spring
means.
[end of Claim 46]

"Conduit" is defined at Spec. ¶ [0222] - [0224].
Spec. ¶ [0031]; Figures 1 and 2, elements 1 - 18,
described at Spec. ¶¶ [0100] - [0128]; The
cheek path airway is a "conduit for a fluid", to wit,
"air" as specially defined at Spec. ¶ [0044].

Figures 1 and 2, element 17, Spec. ¶ [0192].

the spring element is slidably attached to a cheek
path airway, as illustrated in Figs. 1, 2 and 3,
Spec. ¶¶ [0085] - [0087], [0192] - [0194],
especially Spec. ¶ [0192], p. 21, l. 16 - 19; p. 22,
lines 3 - 6, and "lacing holes", element 17, Spec.
¶¶ [0128], [0217].

MAPPING TO SPECIFICATION

See detail in Figure 3 and abstract. "User's
cheek pouch" defined at Spec. [0041].

Inter occlusal space, opening and closing,
discussed at Spec. [0063]

Figure 3, flexible, resilient filament 28, depicted
within a user's cheek pouch depicted by dotted
line 50. Described at Spec. ¶¶ [0192], [0219]

Figure 3, flexible, resilient filament 28, laced
through hollow tube's lacing holes 17, described
at Spec. ¶ [0128] and depicted within dotted line
50.

(vi) GROUND OF REJECTION TO BE REVIEWED ON APPEAL.

FINAL REJECTION GROUNDS. Applicant appeals from all grounds of rejection stated in the Office Action of 01/04/2010. They are as follows:

Claims 33-34, 40-41, 43 and 46 are rejected under 35 U.S.C. 102(b) as being anticipated by Cameron (U.S. Patent 1,389,436).

Claims 35 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cameron (U.S. Patent 1,389,436) in view of Rodriguez (U.S. Patent 6,428,316).

Claims 36, 39, and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cameron (U.S. Patent 1,389,436) in view of Seyler (U.S. Patent 4,889,327).

Claims 37-38 and 44 are rejected under 35 U.S.C. 103(a) in view of Diaz (U.S. Patent 4,041,937).

Claims 37 and 44 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

INTERIM REJECTION GROUNDS, NOT LISTED IN FINAL REJECTION.

For the sake of completeness, Applicant hereby also appeals from all grounds of rejection stated in the non-final Office Action of 10/06/2008. The Examiner may have silently, but has not explicitly, abandoned the grounds of rejection based upon anticipation by Liou (U.S. Patent 6,273,713) that initially were stated upon re-opening prosecution in the Office Action mailed 10/06/2008.

After Applicant traversed the citation of Liou, the Examiner omitted Liou in the final rejection mailed 01/04/2010. Rather than defending Liou, the Examiner performed a third search and switched art yet again, citing Cameron as new art.

The interim grounds of rejection stated on 10/06/2008 and based on Liou are as follows:

Claims 33-34, 37-38, 40-41 and 43 are rejected under 35 U.S.C. 102(b) as being anticipated by Liou (US Patent 6,273,713).

Claims 35 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liou (US Patent 6,273,713) in view of Rodriguez (U.S. Patent 6,428,316).

Claims 36 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liou (US Patent 6,273,713) in view of Seyler (US Patent 4,889,327)

(vii) ARGUMENT.

Summary of Argument.

This is a second appeal in this application, after the Examiner conceded Applicant's arguments in the first appeal, abandoned his initial reliance on Leal (U.S. Patent 5,199,872), re-opened prosecution, and cited new art.

A key error fatally infects all currently pending final rejections for anticipation and obviousness. The Examiner erroneously refuses to allow Applicant to be his own lexicographer, contrary to MPEP 2111.01, IV.

The Examiner Contradicts The Unique Anatomical Limits Of the Term "User's Cheek Pouch" That Are Specially Defined in Applicant's Specification.

The Examiner's erroneously finds anticipation by contradicting Applicant's limiting definition of "user's cheek pouch" as follows:

"Moreover, the Cameron device [U.S. Patent 1,389,436] **is sized to fit in only one cheek pouch because it is sized to fit between the user's teeth on one side of the user's mouth** and fit in the corresponding cheek pouch." (bold emphasis added) Office Action, 01/04/2010, p. 2:7-9.

The Examiner employs his factually incorrect statement that Cameron's dental retractor is "sized to fit within a user's cheek pouch" in every final rejection under Sections 102 and 103. See Office Action of 01/04/2010, p. 2: 20-22; p. 5:2-5; p. 5:15-16 & 20; p. 6:19-20; p. 7:3; p. 7:18-19; p. 8:5-6.

The Biting, Tongue-adjacent, and Interstitial Surfaces of a User's Teeth Are Outside the Specially Defined Limits of a "User's Cheek Pouch".

Applicant's cheek pouch anchor does not have any teeth-engaging elements. No teeth-engaging elements appear in Applicant's claims. Applicant's Specification ¶ [0041] coins the term "user's cheek pouch" and specially, uniquely defines the anatomical limits of a "user's cheek pouch." Applicant then uses that specially defined term in every independent claim. Applicant's claims all use variations of the coined limitation that the cheek pouch anchor is adapted or sized to fit "within a user's cheek pouch," or "within one of a user's

cheek pouches" or "wholly within" one of a user's cheek pouches.

Under the limiting definition in Applicant's Specification of a "user's cheek pouch," the occlusal (biting), interstitial, and lingual (tongue-adjacent) surfaces of the user's teeth are **outside** of, not "within", a "user's cheek pouch." See Applicant's Spec. ¶¶ [0030], [0064], [0140] - [0145], [0176], and Fig. 3, dotted line 50. The buccal (cheek-side) surfaces of a user's teeth, gums and dental arches form the inner limit of a user's cheek pouch. See Figure 3. When emplaced in a user's cheek pouch, the cheek pouch anchor lies adjacent to, but does not attach to, the buccal (cheek-side) surfaces of a user's teeth, gums and dental arches. *Id.* The inner faces of a user's cheek and lips drape over the cheek pouch anchor and form the outer limit of a user's cheek pouch. Applicant's anchor is structured to avoid attachment to teeth and to avoid retractive or palatal adjustment functions. Spec. ¶¶ [0030], [0041], [0049], [0050] [0058] - [0064], [0072].

The Cheek Pouch Anchor is Not Anticipated By Cameron Or Liou (Claims 33-34, 40-41, 43 and 46)

The Examiner is correct that Cameron's device necessarily must project "between the user's teeth" in order to function as intended by Cameron. Cameron's L-shaped plates 7, 7 and hooks 8, 8 must engage and must leverage upon the occlusal and lingual surfaces of a user's teeth in order to retract a patient's jaws open. That essential element of Cameron's device patentably distinguishes Applicant's claims to the cheek pouch anchor.

Precisely because Cameron's device must fit "between the user's teeth", the Examiner objectively, factually errs by stating that Cameron's device can be "sized to fit in only one cheek pouch." This is because the space "between the user's teeth" is **outside of, not "within one of"**, a "user's cheek pouches", as specially defined in Applicant's Specification. The Examiner improperly contradicts the specially defined limits of a "user's cheek pouch" by insisting incorrectly that the occlusal and lingual surfaces of a user's teeth, (which Cameron's plates 7, 7 must engage) are "within" a user's cheek pouch.

The Examiner made this identical error when citing the palatal adjustment device of Liou (U.S. Patent 6,273,713) before apparently abandoning reliance on Liou. Liou's device also must engage the user's teeth and cannot be "sized to fit within one of a user's cheek pouches." Liou's device necessarily must attach to the lingual and interstitial surfaces of a user's teeth, by Liou's barrel bands 13, 14, to perform Liou's intended function of forcing

adjustments in a user's jaw and palate.

Application to The Cheek Pouch Anchor of Patent Law Standards for Anticipation and the Inherent Feature Doctrine.

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). To invoke the inherent feature doctrine an examiner must provide evidence that descriptive matter missing from a reference is **necessarily** present in the thing described in the reference; that it may occur or be present under some circumstances is insufficient. See *MPEP 2112, subd. IV*. Where a characteristic must be achieved by optimization of a prior art device, that characteristic is not necessarily present in the prior art and therefore is not inherent. *In re Rijckaert*, 9 F.3d 1531, 1534, 28 USPQ2d 1955; *In re Oelrich*, 666 F.2d 578, 581-582, 212 USPQ 323, 326 (CCPA 1981). See also, *Ex Parte Levy*, 17 USPQ2d 1461, 1468; *MPEP § 2114*. Apparatus claims cover what a device is, not what the device does. An invention need not operate differently than prior art to be patentable, it need only be structurally different. *Hewlett-Packard Co. v. Bausch & Lomb Incorporated*, 909 F.2d 1464, 1664, 15 USPQ2d (BNA) 1525 (Fed. Cir. 1990).

Cameron (US Patent 1,389,436) and Liou (US Patent 6,273,713) do not anticipate the claimed cheek pouch anchor because Cameron and Liou achieve stability in a patient's mouth by attaching to and leveraging against the hard occlusal, lingual and/or interstitial surfaces of a patient's teeth. See Cameron's L-shaped plates 7, 7 and Liou's barrel bands 13, 14.

By patentable, structural distinction, Applicant's cheek pouch anchor explicitly avoids attachment to or interference with a user's teeth. Spec. ¶¶ [0049], [0050]. Applicant's claims do not contain any teeth-attachment elements.

The cheek pouch anchor is structured to reside "within" a user's cheek pouch so as to permit unrestricted opening and closing of a user's mouth, lips, and jaws and to avoid interference with the user's teeth. Spec. ¶ [0072], Fig. 3. This is a definitive, structural distinction that negates anticipation by either Cameron or Liou.

The Examiner erroneously finds anticipation by improperly expanding Applicant's explicit anatomical definition of "user's cheek pouch" to erroneously include the space

"between a user's teeth" into which the Cameron and Liou devices necessarily must project when they engage the biting, tongue-adjacent, and/or interstitial surfaces of a user's teeth.

Neither Cameron Nor Liou Is Anticipating Art Under The Inherent Feature Doctrine.

The Examiner may be silently presuming, erroneously, that the spring elements of either Cameron or Liou *inherently* would stabilize themselves in a user's cheek pouch if their teeth-attachment elements were severed. The Examiner has the burden of showing that a feature is inherent in a prior art device. The Examiner has not done so here. Applicant cannot perceive any way that the Examiner could demonstrate that the spring element of either Cameron or Liou would inherently self-stabilize in a user's cheek pouch without Cameron's and Liou's attachments to the user's teeth.

Simple analysis of the drawings and other disclosures of Cameron and Liou show the contrary -- their spring elements most likely would be unstable in a cheek pouch if their teeth-attachment elements were severed. See Cameron's L-shaped plates 7, 7 and Liou's barrel bands 13, 14.

A feature is not inherent in a device if that feature could only appear by rendering that device unable to perform its intended function.

The devices of Cameron and Liou would be incapable of performing their intended jaw-retraction and palate-adjustment functions after severance of their teeth-engaging elements. Cameron and Liou also would fail their intended purposes if their teeth-engaging elements were left attached to their spring elements, but the whole devices actually were confined "within" one of the user's cheek pouches and not permitted to attach to the user's teeth.

Cameron's wires 5 and coil 6 would not *necessarily* self-stabilize in a user's cheek pouch if severed from attachment to the user's teeth. If Cameron's wires 5 and coil 6 were severed from L-shaped plates 7, 7, and emplaced within a user's cheek pouch, then wires 5 and coil 6 would not *necessarily* have the cheek pouch anchor's claimed "dynamic span" that expands as a user's jaws open and "flexibly compresses to allow a user's jaws and lips to fully close while said spring element is within one or more of a user's cheek pouches."

The Examiner misconstrues the plain English word "within" which is used in Applicant's Specification and Claims.

Each of Applicant's claims 33 - 46 uses the word "within" in variants of the phrase "sized to

fit within ... [a] user's cheek pouch."

The word "within" means "in the compass of; not beyond", or "in the limits of, not going beyond". *Random House Webster's Dictionary, 1993, Random House, Inc.; Chambers's Twentieth Century Dictionary, 1965, W.&R. Chambers, Ltd., first American edition.* Applicant's Specifications and claims have always used "within" in accord with these standard, dictionary definitions. The Examiner incorrectly and unreasonably construes "within" to mean "simultaneously inside and outside the limits of", contrary to the plain dictionary definitions. "Within" does not mean "into" or "partially inside and partially outside."

Liou's Palatal Adjustment Device Does Not Anticipate the Cheek Pouch Anchor (Claims 33-34, 37-38, 40-41 and 43).

The structure of Appellant's cheek pouch anchor is patentably distinct from Liou's palatal adjustment device (US Patent 6,273,713). Liou's spring device is locked to the patient's upper and lower molar teeth by "barrel bands" 13 and 14 (which Liou calls "anchors"). See Liou's Fig. 4. Liou's barrel bands encircle the user's molar teeth, passing through the interstitial spaces between the teeth and around the lingual side of the teeth. Without those barrel bands Liou's device would fail to perform its intended function of adjusting a patient's palate or upper jaw. It cannot reasonably be disputed that Liou's barrel bands 13, 14 project outside a "user's cheek pouch" so that Liou's device cannot fit "within a user's cheek pouch" as does Applicant's cheek pouch anchor. It cannot reasonably be asserted that Liou's spring element could self-stabilize in a user's cheek pouch, and dynamically bridge across the gap between a user's upper and lower teeth, if severed from Liou's barrel bands 13 and 14. See Liou's Fig. 4.

Liou's device must exert a sufficiently strong vertical force on the patient's teeth to "push the jaw upward," or if re-oriented, to impose a "horizontal dragging force" so that "upper molar 1 will be moved forward and causes the upper jaw and teeth to move forward" and thereby force structural changes in the patient's palate or jaw. Liou, col. 1: 62 - col. 2:2; col. 3:6-17. The angle at which Liou's device imposes force upon the patient's molars is critical to Liou's function. That angle is imposed by the manner in which Liou's two arms 81 are attached to the patient's teeth by barrel bands 13 and 14. Liou, col. 2:65 - col. 3:11. Without those attachments to the teeth, Liou's device could not work as intended.

These obvious structural and functional distinctions, pointed out by Applicant's traverse, may explain why the Examiner omitted Liou from his explanation of the second final rejection mailed January 4, 2010.

All of the Final Obviousness Rejections Incorrectly Begin With the Examiner's False Threshold Premise That The Claimed Cheek Pouch Anchor Is Equivalent To And Anticipated By The Cameron Or Liou Dental Devices.

Cameron and Liou do not anticipate the claimed cheek pouch anchor, for reasons explained above. If structurally modified to sever their teeth-attaching elements and otherwise optimized to function as Applicant's cheek pouch anchor is claimed to do, then the Cameron and Liou devices would be unable to perform their intended functions. Therefore, one of ordinary skill in the relevant art would have no motivation to so modify Cameron or Liou, absent the teaching of Applicant's Specification.

Cameron Modified By Rodriguez Does Not Show Obviousness Of The Cheek Pouch Anchor Combined With a Fluid Conduit.

When rejecting claims 35, 42, 45 and 46, the Examiner speculates that the tube of Rodriguez could be inserted through the opening in coil 6 of Cameron's spring element. This speculation is based upon a misreading of Cameron's drawings and specification in which the Examiner apparently incorrectly orients the opening in the center of Cameron's coil 6 as though that opening would face a patient's lips. Cameron, p. 2, col. 2: 38-56, claims 1 and 2. In Appendix 1 of this Brief Applicant provides detailed citations to Cameron's specification and drawings showing that Cameron's wires 5 and coil 6 would lie "substantially snugly against the cheek of a patient". The opening in coil 6 actually would face the user's cheek wall and gums and would not be oriented towards the lips to receive the tube of Rodriguez. It is the Examiner's burden to demonstrate that his speculative modification of Cameron with Rodriguez would be workable. He has not done so. Simple analysis shows that it likely is not workable.

The Examiner's proposed structure still would differ from the structure in claim 45, even if the Examiner's proposal to insert the tube of Rodriguez through the hole in Cameron's coil 6 were workable (which it likely is not). In Claim 45 the cheek pouch anchor is joined to the fluid conduit by "lacing the spring element of said cheek pouch anchor through at least one hole in said conduit wall." Neither Cameron nor Rodriguez, nor any

other art cited by the Examiner laces a spring element through the wall of a conduit.

Similarly, the means-plus-function format of claim 46 covers the means of attachment disclosed in the specification and drawings, which is lacing the spring element through the conduit's wall. Cameron combined with Rodriguez does not anticipate this claim 46.

Cameron Modified by Seyler Does Not Show Obviousness of Applicant's Claimed Mechanism for Adjusting the Whole Span of the Cheek Pouch Anchor.

Concerning the rejection of claims 36 and 39, the Examiner cannot show that his proposed modification of Cameron to add the multiple spring coils of Seyler would work *according to Applicant's structural mechanism* for mutually-converse adjustment of spring loops to achieve adjustment of the whole span of the Cameron's spring element. Neither Cameron nor Seyler teaches that mechanism of adjustment.

The Examiner does not show that the torsion spring coils of Seyler, without any optimization, ***necessarily*** would be capable of the mechanism for adjustment that Applicant claims. Seyler teaches use of multiple loops in a coil to increase the forcefulness of a spring, not to render the whole span of the spring element adjustable. There is no reason to believe that Seyler's more forceful spring coils would have the necessary balance between flexibility and resilience required to function as a cheek pouch anchor. See Applicant's Specification ¶ [0219] concerning methods to control that balance.

The Examiner does not show any suggestion in prior art, nor any motivation, for one of ordinary skill in the relevant art to combine Cameron and Seyler to achieve Applicant's mechanism for adjusting the whole spring element.

Claims 37 and 44 Point Out and Distinctly Claim the Subject Matter that Applicant Regards As the Invention.

Claims 37 and 44 appropriately use the term "improved" and state in plain, simple claim language what is improved and how it is improved. One of ordinary skill in the relevant art would understand in light of the Specification what is improved in claims 37 and 44.

The Limitations Following the "Adapted To" Phrase Are Mandatory Limitations On An Apparatus Claim; They Are Not Optional Steps of A Method Claim.

The Examiner states:

"The adapted to language used in claim 1(sic) does not further limit the particular structure claimed. It merely list steps the device should optionally be able to perform. See MPEP 2111.04[R-3]."

There is no pending "claim 1" and Applicant is uncertain as to which pending claim the Examiner intended to reference. The Examiner's comment appears as part of his explanation for his rejection of claims 37, 38 and 44 for obviousness, so Applicant will assume that the Examiner's comment refers to claim 37, which does use the phrase "adapted to".

In claim 37 the phrase "adapted to" follows the preamble and also follows the word "comprising." Therefore, the limitations listed after the word "adapted" are mandatory, not "optional," limitations. These are limitations on the structure of the claimed apparatus. They are not "steps" in a process or method claim.

MPEP 2111.04 [R-3] does not prohibit use of "adapted to" or "adapted for" or "wherein" or "whereby" clauses. Instead, it recites the rule that a determination whether a particular clause is a limitation depends on the facts of the specific case. Here the "adapted to" clauses plainly are limitations, not "optional steps". Such clauses cannot simply be disregarded where they state a condition material to patentability, as the limitations in claim 37 do state.

These same points also are true in each of Applicant's other claims that use the phrase "adapted to."

In Appendix 1, Applicant provides detailed authorities rebutting a contention the Examiner asserted in earlier stages of prosecution of this application that he is entitled to ignore everything that follows the phrase "adapted to." This is another example of the Examiner's unreasonable construction of plain language and explicit definitions.

The Examiner Should Not Be Given A Fourth Opportunity to Search For and Cite New Art.

The Examiner has consumed more than six years of prosecution, twice performing a new search and serially citing as anticipating art three patents for dental retraction and palatal adjustment devices. Leal, (US Patent 5,199,872), Liou (US Patent 6,273,713) and Cameron (US Patent 1,389,436). After five years of prosecution (Nov. 2003 - Sept. 30,

2008) and Applicant's first appeal brief, the Examiner explicitly withdrew reliance on Leal and re-opened prosecution.

The re-opened prosecution has consumed more than fifteen months (Sept. 30, 2008 - January 4, 2010) in addition to the five years lost incorrectly citing Leal. The Examiner then cited Liou in an interim rejection but omitted Liou in the currently pending final rejection of January 4, 2010, though the Examiner has not explicitly abandoned reliance on Liou.

In simple fairness, three searches of this relatively simple art should be sufficient examination by the Patent Office. Nearly one third of the patent term already has been consumed by dilatory examination.

APPENDIX 1. DETAILED DISCUSSION OF ISSUES AND CITED PRIOR ART.

In this Appendix 1, Applicant elaborates upon the foregoing summary statement of the errors in the Examiner's second final rejections. Applicant shows in detail that each claim has patentably distinguishing limitations that negate anticipation by either Cameron or Liou and that also negate obviousness.

DETAILED ISSUES AND ARGUMENTS RE ANTICIPATION UNDER 35 U.S.C. 102(b).

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of California, supra*.

ISSUE 1. The Examiner Contradicts Applicant's Special Definition of the Anatomical Term "User's Cheek Pouch" And Incorrectly Construes A "User's Cheek Pouch" To Include The Occlusal, Lingual, and Interstitial Surfaces of a User's Teeth, as Well as the Inter Occlusal Space Between A User's Upper and Lower Teeth. (Claims 33 - 46).

Summary: The Examiner finds anticipation of the claims only by repeatedly violating the rule of law that an applicant is entitled to be his own lexicographer.

The Examiner erroneously reads the claimed elements of the cheek pouch anchor on Cameron and Liou by improperly expanding the meaning of "user's cheek pouch" to

include the occlusal, lingual and interstitial surfaces of the user's teeth, as well as the gap (inter occlusal space) between a user's upper and lower teeth. The Examiner refuses to accept Applicant's limiting, express, anatomical definition of "user's cheek pouch" that excludes the occlusal, lingual and interstitial surfaces of the user's teeth. Spec. ¶¶ [0041]. See also Spec. ¶¶ [0030], [0050], [0072]. The Examiner insists on his factually erroneous premise that prior art devices that attach to or otherwise engage a patient's teeth can fit "within" a user's cheek pouch."

The Examiner also violates the rule that a word must be given its plain meaning consistent with the specification. In each of claims 33 - 45, the Examiner refuses to accord to the word "within" the common, dictionary meaning that Applicant explicitly adopted. Instead, the Examiner substitutes his own idiosyncratic definition, inconsistent with dictionary definitions cited by Applicant. In claim 46, the Examiner similarly refuses to accord limiting meaning to the phrase "wholly within" a user's cheek pouch".

ISSUE 1.1. Applicant Is Entitled To Act As His Own Lexicographer to Specially Define the Term "User's Cheek Pouch" In the Specification.

Where the application provides an explicit definition for a term, that definition will control interpretation of the term as it is used in the claim. *MPEP* § 2111.01, *subd. IV*, citing *Toro Co. v. White Consolidated Industries Inc.*, 199 F.3d 1295, 1301, 53 USPQ2d 1065, 1069 (Fed. Cir. 1999). *Innova/Pure Water, Inc. v. Safari Water Filtration Systems, Inc.* 381 F.3d 1111, 1117; 72 USPQ2d (BNA) 1001 (Fed. Cir. 2004) states:

"A patent applicant thus has the flexibility to imbue new or old terms with a different meaning than they would otherwise have to a person of ordinary skill in the art. See *Autogiro Co. of Am. v. United States*, 181 Ct. Cl. 55, 384 F.2d 391, 397 (Ct. Cl. 1967) ("Patent law allows the inventor to be his own lexicographer."). All that is required is that the patent applicant set out the different meaning in the specification in a manner sufficient to give one of ordinary skill in the art notice of the change from ordinary meaning. *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994); *Intellicall, Inc. v. Phonometrics, Inc.*, 952 F.2d 1384, 1387-88 (Fed. Cir. 1992)."

See *MPEP* § 2173.01 and *MPEP* § 2173.05(a).I.

ISSUE 1.2. Applicant Specially Defined the Anatomical Term "User's Cheek Pouch In the Specification and Drawing Figure 3 to Exclude The Occlusal, Lingual, and Interstitial Surfaces of a Patient's Teeth, and Also to Exclude the Gap (Inter Occlusal Space) between A User's Upper and Lower Teeth.

Applicant specially coined and defined the term "user's cheek pouch" for the purpose of defining the invention claimed in this application. So far as Applicant is aware, the term "user's cheek pouch" never has been used before by anyone else. Applicant's Specification ¶ [0041] states:

"User's cheek pouch" lies between the inner wall of one of such user's two cheeks and the cheek-adjacent side of such user's dental arches, gums and teeth. A user's cheek pouch extends along such user's anterior-posterior ("vertical") body axis between the junctures of such user's mandibular and maxillary dental arches with such user's inner cheek wall. Such cheek pouch extends along such user's dorsal-ventral body axis approximately from a user's front teeth to the general area of such user's most-dorsal teeth and rear-jaw gap. The configuration of a user's cheek pouch dynamically alters as the user's jaws and lips open and close. A user has two cheek pouches located on opposing sides of a user's mouth."

It is plain from this definition that the occlusal (biting), lingual (tongue-adjacent), and interstitial surfaces of a user's teeth are outside of, not within, the defined anatomical boundaries of a "user's cheek pouch." This is confirmed by Applicant's Figure 3, see dotted line 50.

The gap (inter occlusal space) between a user's upper and lower teeth also is outside of, not within, a user's cheek pouch. The cheek pouch anchor is structured to "span" or bridge that gap *in order to avoid rotating or slipping into that gap*.

It is not accidental that the occlusal, lingual and interstitial surfaces of a user's teeth, and the inter occlusal space, lie outside a "user's cheek pouch". The special definition was created to conform to the purpose of the invention, which is avoid the mobile ventral portions of a user's tongue, avoid the biting surfaces of a user's teeth, and still remain stable while the user opens and closes the user's jaws.

The cheek pouch anchor is summarized at Specification ¶¶ [0030] and [0031] as follows:

"[0030] Summary of Cheek Pouch Anchor Invention. The cheek pouch anchor is a spring element which is adapted to be placed within a user's "cheek pouch," an area which lies between the inner wall of a user's cheek and such user's gums and teeth as more precisely defined elsewhere in this disclosure. The cheek pouch anchor of the instant invention can expand and compress in a resilient or spring-like manner within user's cheek pouch as a user opens and closes the user's jaws. A cheek pouch anchor can better maintain a cheek path airway's positioning while avoiding the more mobile ventral portions of a user's tongue, avoiding the biting surfaces of a user's teeth, resisting expulsion from the user's mouth, and mitigating the risks of choking and gagging."

[0031] The cheek pouch anchor invention is capable of receiving joiner to a work piece that is to be positioned at least partially within such user's cheek pouch. The cheek path airway is one type of work piece that can be joined to the cheek pouch anchor."

The Specification repeatedly states that the purpose of the invention is to stabilize an airway without anchoring to the user's teeth:

[0058] Slippage and Rotation Problems of Cheek-side Airways.

[0059] Cheek-side airways have numerous modes of potentially undesirable motion, including the three axes of translational motions (anterior-posterior, dorsal-ventral, and side-to-side or "lateral"), as well as the three modes of rotational motion (roll, pitch and yaw).

[0060] Undesirable motions of a cheek-side airway include: slippage of the device between the biting surfaces of a user's teeth; interference with the user's tongue motions; slippage into gagging or choking positions; dorsal-ventral slippage of the device between the user's lips, and expulsion from the user's mouth.

[0061] In Nelson's tubes, for example, undesirable rotation of the tube caused blockage of air openings by the user's mouth tissues. Nelson's tubes also were subject to dorsal-ventral slippage. Nelson, U.S. Patent 4,289,127, col. 1:35-45. Nelson developed cheek-side stabilizing devices to mitigate undesirable rotational motions (see particularly U.S. Patent 4,289,127), as well as to prevent dorsal-ventral slippage and impairment of the user's lip seal (see U.S. Patents 4,170,230,

4,261,354, 4,262,666, 4,275,725, and 4,289,127).

"[0062] Fixed-span cheek-side stabilizing devices, such as the fin-like, wire-like and rod devices of Nelson, have a potentially disabling instability problem. Such fixed-span devices cannot dynamically adjust to maintain a span across the gap (inter occlusal space) created between a user's maxillary and mandibular teeth as the user's jaws open. However, a user's jaws sometimes can open beyond that fixed-span height, allowing the fixed-span device to rotate or slip between the biting (occlusal) surfaces of the user's teeth.

[0064] The instant invention's solution to the instability problem of fixed-span cheek-side positioning devices is to use a spring which resiliently expands and compresses within the user's cheek pouch as the user's jaws open and close. The expansion of the resilient cheek pouch anchor of the instant invention when a user's jaws open can usefully increase the stability of a cheek-side airway over that of a fixed-span cheek-side stabilizing device even if the resilient device is unable to expand the full vertical height of a user's maximum jaw opening. This is because most jaw openings are less than the maximum potential jaw opening.

[0072] An objective of this invention is to provide an airway passing from external air through a user's otherwise-closed lips to the rear of the user's oral cavity, while by-passing the user's jaws, tooth biting surfaces, and much of the user's tongue, including the more mobile forward portions of the user's tongue. In particular, it is an objective of this invention to provide an airway which can stabilize itself within in a user's cheek pathway without anchoring to a user's teeth, thus permitting opening and closing of the user's jaws without disruption of the airway's cheek pathway positioning."

ISSUE 1.3. The Examiner Improperly Contradicts Applicant's Special Definition of Cheek Pouch Anchor.

The Examiner's final rejection argument directly contradicts Applicant's definition of "user's cheek pouch" as follows:

"Moreover, the Cameron device is sized to fit in only one cheek pouch ***because it is sized to fit between the user's teeth*** on one side of the user's mouth and fit in the corresponding cheek." (bold italic emphasis added) Office Action mailed January 4, 2010, p. 2:7-10.

The Examiner's argumentative statement is internally contradictory because, by Applicant's special definition, a device that is sized to "fit between the user's teeth" cannot also "fit in only one cheek pouch." The space "between the user's teeth" is outside of, not within, a user's cheek pouch.

ISSUE 1.4. Cameron's Dental Retractor Is Structured to Engage the Occlusal and Lingual Surfaces of a User's Teeth and to Fit "Between The User's Teeth"; It Therefore Necessarily Extends Outside Of, and Cannot Fit "Within," a User's Cheek Pouch. (Claims 33 - 46)

Cameron states that his plates 7, 7, are soldered or welded to Cameron's wires 5, with hooks 8, 8 "of sufficient width and depth to permit the patient's teeth to conveniently engage them." Cameron, col. 2: 68-77, and fig. 1. Thus, it is beyond reasonable dispute that Cameron's device is deliberately structured to do what Applicant's cheek pouch anchor is deliberately structured to not do: engage the biting and tongue-adjacent surfaces of a user's teeth.

Equally importantly, Cameron's plates 7, 7 with hooks 8, 8 are deliberately structured to prevent complete closure of a patient's teeth and jaws. Cameron, col. 1:9 - 24; col. 2:89-96; see gap 11 in the dotted-line portion of figure 1. Because the plates insert between upper and lower teeth, they would prevent full closure, even if Cameron did not introduce angled tips 10 to increase the minimum gap.

By patentable distinction, Applicant's cheek pouch anchor is structured to stabilize itself and a cheek-path airway, without anchoring to a user's teeth, by resiliently expanding and compressing within the user's cheek pouch. It permits opening and closing of the user's jaws without disrupting the anchor or an attached airway. Spec. ¶¶ [0064], [0072].

Applicant's claims 33, 38, 39, 40, 41, and 43 all claim that the cheek pouch anchor is adapted to be placed or is sized to fit "within" a user's cheek pouch. They all also claim that the anchor resiliently expands and compresses as the user's jaws open and close.

Applicant's claims 39, 40, 41, and 43, all contain the further limitation that the spring element allows the user's lips and jaws to "fully close." Cameron's device is structured to prevent it from doing these very things that Applicant's cheek pouch anchor is structured and claimed to do.

ISSUE 2. The Examiner Misconstrued the Word "Within" to Mean "Simultaneously Inside and Outside Of" And Thereby Violated Rule That A Word Must Be Given Its Plain English Meaning Consistently With An Applicant's Specification. (Claims 33 - 46).

The word "within" means "in the compass of; not beyond", or "in the limits of, not going beyond". *Random House Webster's Dictionary*, 1993, *Random House, Inc.*; *Chambers's Twentieth Century Dictionary*, 1965, *W.&R. Chambers, Ltd., first American edition*. Contrary to the Examiner's idiosyncratic constructions, "within" does not mean "simultaneously inside and outside the limits of." "Within" does not mean "into".

Applicant's specification and claims use the word "within" in accord with the plain, dictionary meaning of the word as quoted above.

Here the Examiner has idiosyncratically and improperly construed the word "within" to mean "simultaneously inside and outside" inconsistently with dictionary definitions and inconsistently with the usage in Applicant's specification. The Examiner's construction is excessively broad and unreasonable when tested by the plain-meaning standard.

ISSUE 3. Applicant's limitation "sized to fit ***within one of*** a user's cheek pouches" does not read either on Cameron or on Liou. (bold, italic emphasis added). (Claims 41 - 43).

Even if a prior art device performs all of the functions recited in an apparatus claim, the prior art cannot anticipate the claim if there is any structural difference. *MPEP* § 2114.

The Examiner improperly refuses to accord any weight to Applicant's claim limitation "sized to fit ***within one of*** a user's cheek pouches" in claims 41 to 43. He also refuses to accord weight to the phrase "fit wholly within a user's cheek pouch" in claim 46.

None of Applicant's claims 33 - 46 includes any structure equivalent to Cameron's L-shaped plates 7, 7, that are soldered or welded onto Cameron's wire arms 5 and spring coil 6 and that engage the patient's teeth. Cameron, col. 2: 65 -77, figs. 1, - 4. Plates 7, 7 and hooks 8, 8 are essential to the dental retraction function intended by Cameron.

Similarly, none of Applicant's claims 33 - 46 includes any structure equivalent to Liou's barrel bands 13 and 14, that latch onto a patient's teeth, nor any equivalent to Liou's controls over Liou's angle Θ . See Liou Fig. 3.

Applicant's phrase "within one cheek pouch" in claims 41 - 43, and the phrase "wholly within a cheek pouch" in claim 46, therefore do not read on either Cameron or Liou. These two claim limitations negate anticipation by either Cameron or Liou.

ISSUE 3.1. The Spring Elements of Cameron and Liou Do Not *Inherently* Have The Capability To Self-Stabilize Within in a Patient's Cheek Pouch If Their Attachments to Upper and Lower Teeth Were To Be Severed; Neither Is There Any Such Suggestion In Cameron Or Liou.

The inherent feature doctrine requires an examiner to produce evidence that descriptive matter missing from a reference is *necessarily* present in the thing described in the reference; that it may occur or be present under some circumstances is insufficient. See *MPEP 2112, subd. IV*. Where a characteristic must be achieved by optimization of a prior art device, that characteristic is not necessarily present in the prior art and therefore is not inherent. *In re Rijckaert, supra*; *In re Oelrich, supra*. See also, *Ex Parte Levy, supra*.

Cameron and Liou stabilize their devices by the conventional methods of locking dental retractors and dental adjustment devices to the patient's upper and lower teeth. The Cameron and Liou devices therefore have no need to self-stabilize by the dynamic gap-bridging mechanism used in Applicant's cheek pouch anchor.

A person of ordinary skill in the relevant therefore would have no motivation to adjust the whole span of Cameron and Liou's spring elements to bridge the dynamic gap between the user's upper and lower teeth. Attachments to the user's teeth perform this function for Cameron and Liou.

By patentable distinction, the cheek pouch anchor has to stabilize itself within the user's cheek pouch by bridging the dynamic gap between the user's teeth *because the cheek pouch anchor avoids any attachment to the user's teeth*. Spec. ¶ [0072]. [Note 5]

5 The Examiner adopts an unstated presumption that the relevant skilled art is dentistry, and more particularly dental retraction or palatal adjustment. Applicant

ISSUE 3.2. It Would Only Be Accidental If Some Version of Cameron's Wires 5 and Coil 6 Could Self-Stabilize In a Cheek Pouch When Severed From Attachment to Upper and Lower Teeth.

The Examiner's speculation, that Cameron's device could self-stabilize in a cheek pouch if severed from attachment to the user's teeth, is contrary to common sense analysis.

The Examiner asserts that "the Cameron/Rodriquez device does not need the spring arms to not be anchored between the teeth in order to read on the present claims." Office Action of 01/04/2010, p. 3:1-3. The meaning of the Examiner's double negative is unclear.

Perhaps the Examiner employed the double negative to re-state his factually erroneous view that a device "anchored between the teeth" still is fitted "within one cheek pouch." As explained above, that view contradicts the definition in Applicant's Specification of "user's cheek pouch." It is an error as a matter of law.

Perhaps the Examiner is speculating that if Cameron's wires 5 and coil 6 were severed from Cameron's teeth-engaging, L-shaped plates 7, 7, then wires 5 and coil 6 could function as a self-stabilizing "anchor" equivalent to Applicant's cheek pouch anchor. There is no factual basis for such speculation. The Examiner does not explain in any detail how the Examiner proposes to re-configure Cameron's wires 5 and coil 6 to achieve self-stabilization in a cheek pouch without attachment to a user's teeth. That is not an easy re-configuration because of the non-symmetric posture of the center of gravity of Cameron's wires 5 and coil 6. It would only be accidental if some configuration of Cameron's wires 5 and coil 6 were independently self-stabilizing in a user's cheek pouch when severed from Cameron's L-shaped plates 7, 7. It is not an inherent feature of Cameron's wires 5 and coil 6 that they would self-stabilize in a user's cheek pouch if they were severed from

traverses the Examiner's unstated presumption that dentistry is the appropriate field of art. The closer, more appropriate art is that concerning stabilization of cheek-path airways, and particularly the devices of Nelson cited in Applicant's Specification ¶¶ [0019] - [0020]. The Nelson devices do not attach to a user's teeth, and have no apparent dental retraction or periodontal adjustment function.

Cameron's L-shaped plates 7, 7. [Note 6]

To invoke the inherent feature doctrine an examiner must provide evidence that descriptive matter missing from a reference is **necessarily** present in the thing described in the reference; that it may occur or be present under some circumstances is insufficient. See *MPEP 2112, subd. IV*. Where a characteristic must be achieved by optimization of a prior art device, that characteristic is not necessarily present in the prior art and therefore is not inherent. *In re Rijckaert, supra*; *In re Oelrich, supra*. See also, *Ex Parte Levy, supra*.

If Cameron's wires 5 and coil 6 were severed from plates 7, 7 and placed in a user's cheek pouch, then wires 5 and coil 6 as a whole would not be stable, but rather would tend to rotate on the pitch axis. (See Applicant's Specification ¶ [0059] for references to roll, pitch and yaw rotations.) Compare Cameron Figure 1 to Applicant's Figure 3. Cameron's longer span, between the tips of wires 5, would tend to pitch by 90 degrees from the vertical position depicted in Cameron's Figures 1 and 3 into a horizontal position in the cheek pouch. This would be especially likely because much less force would cause such pitch rotation than would be necessary to compress Cameron's spring coil 6 by a user's teeth impacting upon Cameron's plates 7, 7. Indeed, if plates 7, 7 were severed, gravity would tend to displace the center of gravity (probably located at Cameron's coil 6) to seek the lowest position in the user's cheek pouch, (though occasionally by chance the two tips of Cameron's wire 5, rather than coil 6, might rotate to the bottom of the cheek pouch). Any motion of the patient's jaws would tend to destabilize a vertical posture of Cameron's wires 5 and coil 6 if Cameron's teeth-engaging L-shaped plates 7, 7 were severed from wires 5 and coil 6. Cameron's device would tend to move into a posture of least resistance in the cheek pouch.

When so rotated from a vertical to a horizontal posture, Cameron's wires 5 and coil

6 If Cameron's whole device (with plates 7, 7, and hooks 8, 8, soldered to wires 5) were somehow to be inserted wholly **within** a user's cheek pouch so that plates 7, 7 and hooks 8, 8 were not inserted between the user's upper and lower teeth, then plates 7, 7 and hooks 8, 8 would gouge the soft tissues of a user's cheek wall and gums. Applicant cannot envision how any such positioning that could function as a cheek pouch anchor, and the Examiner has not explained how this could occur.

6 would not expand and compress as the user's jaws open and close. After rotating into such a horizontal position, Cameron's wires 5 and coil 6 would not automatically span the gap between the user's teeth as the user's jaws open and close. Rather, wires 5 and coil 6 would then tend to rotate on the roll axis and/or to translate into a position between the user's teeth. This rolling/translating motion would obstruct a user's teeth. This is one of the problems with prior art devices that Applicant's device was invented to solve. Spec. ¶¶ [0058] - [0064]. Thus, there is no factual basis to support a belief that Cameron's wires 5 and coil 6, if severed from L-shaped plates 7, 7, would reliably self-stabilize equivalently to Applicant's cheek pouch anchor.

The Examiner does not cite any art that even remotely suggests how to re-configure Cameron's wires 5 and coil 6 to achieve the self-stabilizing configuration of Applicant's cheek pouch anchor. Instead, the Examiner is attempting to employ the teaching of Applicant's invention by hindsight to suggest severance of Cameron's wires 5 and coil 6 from Cameron's plate 7, 7 followed by some unexplained re-configuration of wires 5 and coil 6 to function equivalently to Applicant's cheek pouch anchor.

ISSUE 3.3. Even If Cameron's Or Liou's Devices Could Perform Operations of The Claimed Cheek Pouch Anchor, They Still Would Not Anticipate the Claims Because There Are Structural Differences.

Even if a prior art device performs all of the functions recited in an apparatus claim, the prior art cannot anticipate the claim if there is any structural difference. *MPEP* § 2114. The cheek pouch anchor, as noted above, has multiple structural differences from Cameron and Liou.

ISSUE 3.4. The Claim Limitation "sized to fit **within one of** a user's cheek pouches" Is Closed, not Open, Syntax. (Claims 41 and 43).

In claims 41 and 43 Applicant's structural limitation "sized to fit **within one of** a user's cheek pouches" is a closed-ended limitation that structurally distinguishes Applicant's claimed "cheek pouch anchor" from the devices of both Cameron and Liou.

Applicant uses the word "within" in its plain, standard, dictionary meaning "inside the limits of; not beyond." Applicant's specification, paragraph [0041] specially defines the limits

of a "user's cheek pouch." Applicant expressly declared the phrase "within one of a user's cheek pouches" to be closed-ended when amending to add claims 41 - 43. (Request for Further Examination, filed September 12, 2007, pp. 2-3). Applicant is entitled to be his own lexicographer.

The Examiner construes the word "within" to mean "simultaneously inside and outside," which is repugnant to the plain, standard meaning of "within." See the first Final Office Action, May 13, 2008, p. 2. The Examiner then incorrectly construes Applicant's closed-ended phrase "within one of a user's cheek pockets" to mean that the claimed anchor simultaneously occupies both of a user's two cheek pockets, in direct contradiction of the plain meaning of Applicant's claim language "within one of a user's cheek pouches". *Id.*

ISSUE 3.5. Neither Cameron's Device Nor Liou's Device Can Fit "Within" One Cheek Pouch.

Applicant's structural limitation "sized to fit ***within one of*** a user's cheek pouches" is a closed-ended limitation that distinguishes Applicant's claimed "cheek pouch anchor" from the devices of Cameron and Liou. This express claim limitation negates anticipation by either Cameron or Liou. Both the Cameron and Liou devices stabilize themselves by attachment to teeth. Therefore, both devices necessarily must extend outside of, and cannot fit "within", the anatomical limits of a "user's cheek pouch" as specially defined in the Specification.

The Examiner's first final Office Action in 2008 improperly rejected Applicant's new closed-ended limitation in claims 41 - 43, stating:

"Applicant argues the Examiner has improperly disregarded a closed limitation of sized to fit within one of a user's cheek pouches. Applicant has not claimed ***only one cheek pouch***; a device can be sized to fit within one cheek pouch while simultaneously fitting into another cheek pouch." Final Office Action mailed May 13, 2008, p. 2. (emphasis added).

Both of the Examiner's two statements are incorrect.

In the Examiner's first statement ("Applicant has not claimed only one cheek pouch"), the Examiner's adds the redundant word "only" to the already-closed phrase

"**within one** of a user's cheek pouches." "Only" adds nothing to Applicant's already-closed limitation "within one".

The Examiner's second construction "fit within one ... while simultaneously fitting into another ...", is repugnant to the plain meaning of the words "within one."

The Examiner has argued incorrectly,

"claiming the device fits in one cheek pouch does not limit it to not be able to fit in the other cheek pouch, because there is no negative limitation preventing it from being within both cheek pouches. Office Action mailed November 9, 2007. [Note 7]

Applicant filed new claims 41 - 43 in order to focus that precise issue with claims that unequivocally negate the Examiner's assertion, but without conceding that Applicant's use of the word "within" in claims 33 - 40 was insufficient to distinguish Liou or Cameron.

Applicant explicitly declared that the claimed structural limitation "sized to fit within one of a user's cheek pouches" in claims 39 - 41 and 43 is semantically closed-ended. Request for Further Examination, filed September 12, 2007, p. 3. Nonetheless, the Examiner still refused to treat the phrase "within one of a user's cheek pouches" as closed syntax.

ISSUE 3.6. Neither Cameron's Device Or Liou's Device Can Fit "Within" Two Cheek Pouches.

The devices of Cameron and Liou cannot fit **within two** cheek pouches, but can only fit **into** two cheek pouches while also extending beyond them. This is because both the Cameron and Liou devices necessarily must engage teeth surfaces that are outside the limits of any cheek pouch, as Applicant has specifically defined "user's cheek pouch."

Applicant has expressly declined to disclaim the plural interpretation of "a user's cheek pouch" in claims 33 - 40. Compare *KCJ Corporation v. Kinetic Concepts, Inc.*, 223 F. 3d 1351, 1356, 55 USPQ2d (BNA) 1835 (Fed. Cir. 2000) (indefinite article "a" following

7 Applicant has no obligation to write into a claim language that affirmatively negates the Examiner's suggestion. Applicant follows the preferred practice of claiming what an article is, rather than claiming what the article is not.

open-ended word "comprising" means "one or more"; but applicant may disclaim before the PTO a plural interpretation of indefinite article "a"). Instead, Applicant filed new, more narrow claims 41 - 43 and 46 while still insisting that broader claims 33 - 38 already adequately distinguish the structures of Cameron and Liou.

The Examiner's statement ("a device can be sized to fit within one cheek pouch while simultaneously fitting into another cheek pouch") has two possible meanings. Both possible meanings are incorrect.

Meaning 1. A single macroscopic device cannot **simultaneously** display two different physical sizes, a smaller size limited to fit within one of a user's cheek pouches, and a larger size that exceeds the size of one of a user's cheek pouches and thus spills over into the second cheek pouch. When read in this sense, the Examiner's second statement is internally contradictory.

Meaning 2. The claimed cheek pouch anchor could be placed between the user's lips and front teeth, where it would lie across the boundary between the user's two cheek pouches and thus "simultaneously" lie partially in one cheek pouch and partially in the other cheek pouch. However, the particular location of **placement** of the anchor in a user's mouth does not alter the **structural limit** on the anchor's inherent compressibility. Applicant's claims do not read on either Cameron or Liou even if the one-pouch-sized anchor were to be **placed** so that the anchor lies partly within one cheek pouch and partly within the other cheek pouch. No matter where placed, the structure of the anchor, as claimed, still has the inherent capacity to fit within the size of one cheek pouch, whereas the devices of Cameron and Liou always engage teeth and therefore never can be so compressed to fit within one cheek pouch. If read in this second sense, the Examiner's statement (that Applicant's anchor can simultaneously fit into two cheek pouches) again fails to demonstrate anticipation by either Cameron's device or Liou's device. Rather, it shows an improper focus by the Examiner upon one aspect of the performance of the claimed anchor rather than upon plain, claimed, structural differences. *MPEP § 2114; Hewlett-Packard v. Bausch & Lomb*, 909 F. 2d 1646, 1468; 15 U.S.P.Q.2d (BNA) 1525.

ISSUE 3.7. Applicant's Two Partially Open Claim Limitations "adapted to be placed within a user's cheek pouch" and "sized to fit within a user's cheek pouch" Do Not

Read on Either Cameron or Liou. (Claims 33, 38, 39, and 40.)

Applicant's claims 33 and 38 use the syntax, " ... comprising: A spring element adapted to be placed **within a user's cheek pouch**". Applicant's claims 39 and 40 use the very similar phrase "sized to fit **within a** user's cheek pouch."

The phrase "**a** user's cheek pouch" in normal patent parlance has the open-ended meaning "one or more cheek pouches." The word "within" still has the closed-ended meaning "inside the limits of; not beyond." According to the special definition in Specification ¶ [0041] a user has two cheek pouches. Thus, the phrase "within a user's cheek pouch" following the transition word "comprising" has the partially open meaning "inside and not beyond the limits of one or two cheek pouches."

These two very similar limitations follow the open-ended transition word "comprising." In normal patent parlance the article "a" is read as open-ended to mean that the cheek pouch anchor must be sized to fit within "one or more cheek pouches". In this Application that means "one or two" cheek pouches because a user, by definition, has two. Specification ¶ [0041].

Even when Applicant's claim limitation "sized to fit within **a** user's cheek pouch" is given the partially open-ended meaning "one or two cheek pouches" it still does not read on either Cameron or Liou. This is because it is a structural limitation that neither Cameron or Liou possesses -- a capacity either to fit **within one** pouch or by adjustment to fit **within two** cheek pouches. As explained in detail above, the Cameron and Liou devices can only fit **into**, but not **within**, two cheek pouches because both of them attach to teeth outside any cheek pouch.

Would a device such as Cameron's or Liou's infringe upon Applicant's claims 33 and 38 - 40 when the claim phrase "a user's cheek pouch" is read to mean "one or two user's cheek pouches"? Plainly not.

The phrase "within **a** user's cheek pouch" in claims 33 - 40 does not read on either Cameron's structure or Liou's structure.

ISSUE 3.8. Applicant's Partially Open Claim Limitation "sized to fit within **one of a** user's cheek pouches" Does Not Read on Cameron or Liou. (Claims 41 and 43.)
The claim limitation " within one of" is a closed limitation in common English syntax.

Moreover, Applicant, acting as his own lexicographer, declared this syntax closed when first using it. The Examiner's refusal to accept this phrase as closed is unreasonable and erroneous.

ISSUE 3.9. Applicant's Claim Limitation "spring means that fit wholly within a user's cheek pouch" Does Not Read on Cameron or Liou. (Claim 46).

Applicant believes that the word "wholly" is a redundant in the phrase "wholly within". This is because the word "within" means "in the compass of; not beyond", or "in the limits of, not going beyond". Applicant amended to add the redundant word "wholly" to demonstrate on appeal that the Examiner unreasonably refuses to recognize **any** closed syntax.

ISSUE 4. The Claim Limitation "flexibly compresses to allow a user's jaws and lips to fully close while said spring element is within one or more of a user's cheek pouches" Does Not Read On Cameron or Liou. (Claims 40, 41 and 43.)

This claim language structurally distinguishes both Cameron and Liou. There are minor variations on this limitation in claims 40, 41 and 43.

In claim 40, Cameron and Liou are structurally distinguished by Applicant's claim limitation:

"A spring element having a dynamic span ***that is flexibly compressible to allow a user's jaws and lips to fully close while said spring element is within a user's cheek pouch ...***".

In claims 41 and 43, Cameron's and Liou's devices also are structurally distinguished by Applicant's claim limitation:

"A spring element ... having a dynamic span such that
said spring element flexibly compresses to allow a user's jaws and lips to fully close while said spring element is within one or more of a user's cheek pouches..."

Applicant's anchor is disclosed and claimed to fit within, and to compress within, a user's cheek pouch. When within the user's cheek pouch, as claimed, Appellant's anchor is vertically compressed by the soft tissues of the user's cheek pouch, not by the hard surfaces of the user's teeth.

The claimed compressibility of Applicant's anchor allows a user to fully close jaws and lips while the anchor is within the user's cheek pouch. This unique compressibility, as claimed in claims 41 - 43 and 46, structurally distinguishes Applicant's anchor from both Cameron and Liou.

The Examiner incorrectly states:

"In addition, there is no indication that the Cameron device cannot be compressed by the soft tissue of the user's mouth, and that is not actually claimed." Final Office Action mailed January 4, 2010, p. 2:14-16.

The Examiner's argument is unreasonable. It is contrary to non-expert common sense. All humans learn the common sense that teeth can sustain and resist much more powerful forces than can the soft tissues of the cheek pouch. This is because the teeth are hard while the soft tissues are more tender and liable to painful pressures. That is why people who lose their teeth acquire artificial dentures.

The Examiner's argument is an improper attempt to shift the Examiner's burden of proof to the Applicant when the Examiner has been unable after six years to find directly relevant, anticipating art. Cameron states that his device is intended to retract a patient's jaws open by force applied to the patient's teeth through Cameron's L-shaped plates 7, 7. It requires only non-expert common sense to understand that the force Cameron's device must impose on teeth to retract a patient's jaws is far greater than the force soft tissues of a user's cheek pouch can sustain.

ISSUE 4.1. The Claimed Wide Range of Expansion of the Cheek Pouch Anchor Structurally Distinguishes It from The Devices of Cameron and Liou. (Claims 33, 38, 39, 40, 41 and 43)

The size of Applicant's anchor is limited in claims 33, 38, 39, 40, 41 and 43 so that the anchor is capable of compression enabling the claimed anchor to fit *within* one of a user's cheek pouches, whether the user's jaws and lips are open or closed. This claimed inherent structural compressibility of the cheek pouch anchor does not read upon either Cameron or Liou. This is because each of the Cameron and Liou devices must simultaneously fit *into* a user's cheek pouch but never can be compressed to fit *within* one cheek pouch because they necessarily must attach to the user's teeth outside the cheek pouch in order to perform their

intended functions.

The claimed compressibility of Applicant's anchor is an inherent structural difference from the Cameron and Liou devices that negates anticipation by either Cameron or Liou. See *MPEP* § 2114.

The claimed cheek pouch anchor also is capable of adjustment that would enable it to expand from a one-pouch size to reach into a second pouch so the anchor could be within the two cheek pouches, not just within one cheek pouch. This is another claimed, structural feature that neither of the Cameron and Liou devices possesses. The structural mechanism of adjustability is claimed in claims 36 and 39.

If the Examiner's second statement ("a device can be sized to fit within one cheek pouch while simultaneously fitting into another cheek pouch") is read in this sense, it still does not demonstrate anticipation by either the Cameron or Liou devices. Instead it shows that the cheek pouch anchor inherently can be adjusted do two things that the structures of Cameron and Liou cannot do, either fit within one cheek pouch or fit within two cheek pouches. The Examiner again is incorrectly focusing upon one aspect of the performance of the claimed anchor rather than upon plainly claimed structural differences. *MPEP* § 2114.

ISSUE 5. In claims 41 - 43, the following combination of limiting claim phrases does not read upon either Cameron or Liou:

"A spring element

sized to fit within one of a user's cheek pouches, and
having a dynamic span such that ... ***said spring element flexibly compresses to allow a user's jaws and lips to fully close while said spring element is within one or more of a user's cheek pouches...***".

ISSUE 5.1. In claims 39 and 40, the following combination of limiting claim phrases does not read upon either Cameron or Liou:

"a spring element formed of a resilient filament

sized to fit within a user's cheek pouch, and

having a dynamic span

that is resiliently expandable within a user's cheek pouch to maintain a bridge

across a user's inter occlusal space and lip opening that form as a user's jaws open, and

that is flexibly compressible to allow a user's jaws and lips to fully close while said spring element is within a user's cheek pouch, ...".

ISSUE 5.2. In claims 33 - 37, the following combination of limiting claim phrases does not read upon either Cameron or Liou:

"A spring element adapted

- to be placed ***within a user's cheek pouch***, and

- ***to compress as a user's jaws close***, and

- to resiliently expand so as to form and maintain a span bridging across a user's inter occlusal space and a user's lip opening formed ***as a user's jaws and lips open and close, ...***"

ISSUE 5.3. In claim 38, the following combination of limiting claim phrases does not read upon either Cameron or Liou:

"A spring element adapted

- ***to be placed within a user's cheek pouch***, and

- ***to compress as a user's jaws close, ...***".

Argument on Issue 5 and Related Sub-Issues.

In claims 41 - 43, the devices of Cameron and Liou are structurally distinguished by Applicant's claim limitations

"A spring element

sized to fit within one of a user's cheek pouches, and

having a dynamic span such that

....

said spring element flexibly compresses to allow a user's jaws and lips to fully close while said spring element is within one or more of a user's cheek pouches..."

The similar claim limitations in claims 33 - 40 also structurally distinguish the Cameron and Liou devices.

The Examiner Disregarded Significant Limiting Language Of Claims 39 - 43.

The Examiner states, incorrectly:

"Applicant argues the Examiner incorrectly asserts that Applicant has not claimed that the claimed invention is compressed by the soft tissues of the user's mouth. However, Applicant merely claims the invention is adapted to compress as the user's jaw closes and expand as the user's jaw expands." Final Office Action mailed May 13, 2008, p. 2.

Applicant's actual limitation in claims 39 - 43 is:

"A spring element

.....

having a dynamic span such that

.....

said spring element flexibly compresses to allow a user's jaws and lips to fully close ***while said spring element is within one or more of a user's cheek pouches, ...***" (bold, italic emphasis added).

This is a structural limitation upon the compressibility of the claimed anchor that distinguishes the claimed anchor from both Cameron's and Liou's devices.

Applicant filed claims 41 - 43 to the cheek pouch anchor to focus certain semantic issues. They claim, among other things, that "said spring element flexibly compresses to allow a user's jaws and lips to fully close ***while said spring element is within one or more of a user's cheek pouches...***"

Applicant explicitly defines a "user's cheek pouch" to be framed by the soft tissues of a user's cheek wall and gums, though it does include the cheek-adjacent side of a user's teeth. Specification, paragraph [0041] and Figure 3, element 50, as described in Specification paragraph [0176]. The biting ("occlusal") surfaces of the user's teeth are beyond the defined limits of the cheek pouch, as are the interstitial and lingual surfaces of a user's teeth. When emplaced "within" a user's cheek pouch, the cheek pouch anchor nestles between junctures of the user's inner cheek wall with the user's upper and lower dental arches/gums. See

Figure 3 and the definition of "user's cheek pouch", Spec. ¶ [0041]. When so emplaced in the cheek pouch, those junctures are the soft tissues that must compress the cheek pouch anchor because the biting surfaces of the teeth do not come to bear on the cheek pouch anchor.

Therefore, Applicant's claim phrase "compresses to allow a user's jaws and lips to fully close while said spring element is within one or more of a user's cheek pouches" necessarily invokes compression by the soft tissues of the user's cheek pouch, but that claim phrase does not invoke compression by the biting surfaces of a user's teeth.

ISSUE 6. The Lesser Forcefulness of the Cheek Pouch Anchor's Claimed Capability to Compress While Within A Cheek Pouch Structurally Differentiates The Cheek Pouch Anchor From The Greater Forcefulness of Cameron's and Liou's Devices Which Operate Upon The Hard Surfaces of a User's Teeth.

The correct comparative test of the structural ease of compressibility of Applicant's anchor versus the Cameron and Liou devices is compressibility by the limited forcefulness of soft tissues of a user's cheek pouch. Compressibility by the forcefulness of the biting surfaces of a user's teeth, which Cameron and Liou both use, is non-comparable. The critical structural difference in compressibility is that Applicant's anchor does "flexibly compress ... while said spring element is within one or more of a user's cheek pouches," where Applicant's structure has no attachment to the user's teeth.

ISSUE 6.1. The Examiner Contradicts Cameron's Specifications and Claims When Rejecting Applicant's Two Claim Limitations "compress *as a user's jaws close*" and "flexibly compresses to allow a user's jaws and lips *to fully close* while said spring element is within one or more of a user's cheek pouches"? (Claims 33, 38, 39, 40, 41, and 43.)

Cameron's L-shaped plates 7, 7 and hooks 8, 8 are specifically structured to insert between the patient's upper and lower teeth and to prevent the patient's teeth from fully closing. See gap 11 in the dotted-line portion of Cameron's figure 1. Thus, Cameron's device does not meet Applicant's claim limitation "allow a user's jaws and lips to fully close".

ISSUE 7. In one claim (probably claim 37), the Examiner incorrectly refused to consider Applicant's claim phrase "adapted to" and any limiting language following that phrase.

The Examiner ambiguously states:

"The adapted to language used in claim 1 (sic) does not further limit the structure claimed. It merely lists steps the device should optionally be able to perform. MPEP 2111.04[R-3]" See Final Office Action mailed Jan. 4, 2010, p. 6:16 - 18.

This is very similar to an earlier statement by the Examiner as follows:

"The "adapted to ..." language has not been considered since it has been held that the recitation that an element is "adapted to" perform a function is not a positive limitation, but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. *In re Hutchinson*, 69 USPQ 138." First Final Office Action mailed May 13, 2008, pp. 4-5, and p. 6 (since withdrawn and prosecution re-opened).

There is no legal principle that an Examiner can simply disregard any limitation that follows "adapted to" or "adapted for" clauses. Where a clause, such as "whereby" states a condition that is material to patentability, that clause cannot be ignored to change the substance of the invention. MPEP 222.04, citing *Hoffer v. Microsoft Corp.*, 405 F. 3d 1326, 1329, 74 USPQ2d 1481, 1483 (Fed. Cir. 2005).

The Examiner materially misstates the current state of the law in general and misstates *In re Hutchinson* in particular. There is no such legal principle in modern patent law.

In MPEP § 2173.05(g) the USPTO has adopted the modern view that the "adapted to ..." phrase can be employed to state a valid functional limitation, citing *In re Venezia*, 530 F. 2d 956, 189 USPQ 149 (CCPA 1976).

In *In re Hutchinson*, the phrase "adapted for" appeared in the "introductory clause" (that is, in the preamble before the word "comprising") of claims 42 and 43 that were at issue there. *In re Hutchinson*, 33 C.C.P.A. 879 at 882-883. Thus, *In re Hutchinson* never has stood for the Examiner's proposition that the phrase "adapted for" has no patentable weight where it is recited in the body of the claim after the word "comprising".

The MPEP does not cite or adopt *In re Hutchinson* for the proposition stated by the Examiner in the instant Office Action. The *In re Hutchinson* discussion of the "adapted for..." phrase was written in 1946. The Patent Act of 1952 then was enacted. Twice thereafter the

Court of Customs and Patent Appeals affirmed use of the phrase "adapted to". *In re Land and Rogers*, 368 F.2d 866, 872, 882, 885, 54 C.C.P.A. 806, 151 U.S.P.Q. 621 (CCPA 1966); *In re Venezia*, *supra* 530 F.2d 956 at 959 (CCPA 1976), and this case law is followed and cited in the most recent edition of the MPEP.

The Examiner's refusal to consider "adapted to ..." and any following language is plain error of law.

ARGUMENT RE REJECTIONS UNDER 35 U.S.C. § 102(b) FOR ANTICIPATION

ISSUE 8. All of The Rejections Under 35 U.S.C. § 103 For Obviousness Have A Common, Threshold Defect In That They Begin With A False Premise That Teeth-Engaging Dental Devices Anticipate the Claimed Cheek Pouch Anchor. (Claims 35, 36, 37, 38, 39, 40, 42, 44, 45, and 46.)

The cheek pouch anchor avoids the lingual, occlusal, and interstitial surfaces of a user's teeth and does not attach to the user's teeth.. See Spec. ¶¶ [0049] - [0050], [0064], [0072].

Using a false, threshold premise that devices which attach to the user's teeth anticipate the cheek pouch anchor, the Examiner then

(i) cites the tube of Rodriquez to find obvious the combination of the cheek pouch anchor with a fluid conduit, and

(ii) cites the cotton wrap of Diaz to find obvious the combination of the cheek pouch anchor with means to release a substance in the user's mouth, and

(iii) cites the multi-coil spring of Seyler to find obvious Applicant's mechanism for adjustment of the span of the whole spring element of the cheek pouch anchor by mutually-converse adjustment of the spring element's multiple spring loops.

ISSUE 8.1. Combination of The Cheek Pouch Anchor With Other Elements Is Not Obvious Because the Cheek Pouch Anchor Itself Is Novel.

When the Examiner's assertion of anticipation by Cameron or Liou fails, then all of the Examiner's obviousness arguments also necessarily must fail. This is because each of the obviousness arguments begins with the incorrect premise that Cameron or Liou anticipates

all of the elements of the cheek pouch anchor.

If Applicant's cheek pouch anchor as claimed is patentably novel, then so are all of the claimed combinations of the cheek pouch anchor with other elements.

ISSUE 8.2. The Examiner's Proposed Modifications of the Cameron and Liou Devices Would Render Those Devices Unsatisfactory for the Purposes Intended by Cameron and Liou. (All obviousness objections)

If references taken in combination would produce "a seemingly inoperative device," then such references teach away from the combination and thus cannot serve as predicates for a *prima facie* case of obviousness. *McGinley v. Franklin Sports*, 262 F.3d 1339, 1354, 60 USPQ2d 1001 (Fed. Cir. 2001)

If a proposed modification would render a prior art device unsatisfactory for its intended purpose, then when evaluating obviousness there is no suggestion or motivation to make the proposed modification. See *MPEP* § 2143.01, *subd. V*. It necessarily follows that a characteristic that would appear only in a malfunctioning device not only is non-obvious, but also is not inherent in that device.

For purposes of an obviousness analysis, both Cameron and Liou teach away from Appellant's device because Appellant's invention (a resilient filament that remains stable within in a cheek pouch by expanding and compressing while the user's jaws open and fully close, with no attachment to the teeth) eliminates both the dental retraction function of Cameron and the palatal adjustment function of Liou.

ISSUE 9. Claim 45, to The Cheek Pouch Anchor Combined With A Fluid Conduit, Is Not Rendered Obvious by Reason of Cameron In View of Seyler.

The Examiner's Final Action incorrectly rejected Claim 45 under 35 U.S.C. 103(a) as being unpatentable over Cameron (US Patent 1,389,436) in view of Seyler (US Patent 4,889,327). This is an obvious error, perhaps typographic, because neither Seyler nor Cameron includes the fluid conduit recited in Claim 45.

ISSUE 10. Claim 45, To the Cheek Pouch Anchor Combined With A Fluid Conduit, Is Not Rendered Obvious by Reason of Cameron In View of Rodriguez.

Perhaps the Examiner meant to assert that Claim 45 is obvious by reason of Cameron in view of the fluid conduit of Rodriguez (US Patent 6,428,316).

The Examiner cannot make out prima facie obviousness by the combination of Cameron and Rodriguez. This is because Rodriguez does not have "a conduit wall" with "at least one hole" and Rodriguez does not teach joinder of the spring element to the fluid conduit "by lacing the spring element of said cheek pouch anchor through at least one hole of said conduit wall," as Applicant states in claim 45.

The Examiner's proposed mechanism for combination of Cameron and Rodriguez is off point and probably is not even workable:

"Rodriguez teaches a fluid conduit (17) that can be coupled to an anchor (fig. 1) by inserting it through the center of coil spring (6), and used during dental procedures.

Therefore, it would have been obvious to one or ordinary skill in the art at the time of the invention to modify the Cameron device with the fluid conduit, as taught by Rodriguez, in order to remove excess saliva or other fluids from the user's mouth during procedures." Final Office Action mailed January 4, 2010, p. 6:21-27.

The Examiner errs in two respects:

1. In Claim 45 Applicant explicitly claims attachment by the unique method of lacing the spring element through at least one hole in the fluid conduit wall. See Applicant's Figures 1 and 2 depicting resilient filament 28 laced through lacing holes 17 in the fluid conduit. Rodriguez does not teach this specifically-claimed method of attachment. This lacing structure mitigates three problems identified in Applicant's Specification. As depicted in Applicant's Figures 1 and 3, the lacing structure achieves a compact, slim alignment of both the resilient filament and the conduit in the same plane within the user's cheek pouch. This helps the cheek pouch anchor conform to the "draping" of the user's cheek wall over the dental arches without having to bend the conduit. See Spec. ¶ [0056]. As can be seen in Figure 3, the lacing structure also tends to elevate the fluid conduit above the floor of the cheek pouch. This elevation reduces the undesirable tendency of a cheek-side airway to pick up saliva from the user's mouth. Saliva tends to block the airway and flow out past the user's lips. See Spec. ¶ [0055], [0077], [0078].

2. The Examiner's speculation that one could "anchor" the tube of Rodriguez "by inserting it through the center of coil spring (6)" of Cameron, probably is physically

unworkable. At best the Examiner's proposed mechanism would be so hopelessly clumsy and unreliable that no person reasonably skilled in the art would do that. Cameron's wires 5 and coil spring (6) are structured to align more or less flatly against the patient's dental arches when L-shaped plates 7, 7 are engaging the patient's upper and lower teeth (Cameron, col. 2:61- 66; Cameron's Figs. 1 and 4; the perspective in Cameron's Fig. 3 is resolved by Figures 1 and 4.) [Note 8] When Cameron's wires 5 and coil 6 are aligned flatly against the teeth/gums, the patient's cheek wall would drape over Cameron's wires 5 and coil 6. (See Applicant's Specification ¶ [0056] concerning the draping effect.) Therefore, the opening in coil 6 would face the cheek wall and the teeth/gums, but would not open towards the patient's lips where coil 6 could receive a fluid conduit straight on. Rather, to pass from the patient's lips through the hole in Cameron's coil 6, a conduit would have to make a turn into the hole in coil 6 and then another turn out of that hole, which together would make a bulky, clumsy, uncomfortable lump in the patient's cheek pouch. A conduit inserted through the hole in coil 6 would tend to torque Cameron's wires 5, coil 6, and L-shaped plates 7, 7 out of proper, flat alignment with the patient's teeth and gums, thus impairing or defeating the function of Cameron's device, and likely causing undue discomfort for the patient. In addition, a conduit inserted through a single hole such as that in Cameron's spring coil 6 would tend to be unstable. It would tend to teeter-totter motions, and would be subject to dorsal-ventral slippage. Compare Applicant's Specification ¶¶ [0059] - [0061]. Applicant's lacing structure simply, positively solves these problems. The Examiner's speculative theory is not a functional or structural equivalent of Applicant's lacing structure.

Claim 45 is not rendered obvious by combination of Cameron with Rodriquez.

8 Applicant infers that the Examiner may have mis-perceived the perspective of Cameron's Figure 3, viewing it as though the bow of wires 5 and coil 6 projects out at 90 degrees from the patient's dental arches and projects the patient's cheek into a tent-like formation so that the central opening in coil 6 would face the patient's lips. To the contrary, Cameron's claims 1 and 3 state, "...whereby when the retractor is positioned in the mouth of the patient the said arms will lie substantially snugly against the cheek of the patient". Cameron, p. 2, col. 4:40-45 and col. 2:52-56. The central opening in coil 6 therefore faces the patient's cheek wall and gums.

ISSUE 11. Claims 36 and 39 Are Not Rendered Obvious by Cameron's Dental Retractor In View of Seyler's Multi-Coil Torsion Spring.

The Examiner fails to show *prima facie* obviousness.

The Examiner states a premise that it would be obvious for one of ordinary skill to combine Cameron's dental retractor with the torsion spring 30 of Seyler (US Patent 4,889,327). The Examiner then improperly leaps to the unfounded, incorrect conclusion that it would be obvious to modify Cameron (or Liou) *according to the particular structural mechanism that Applicant claims* for achieving adjustability in the cheek pouch anchor. This is factually unfounded speculation.

ISSUE 11.1. In Seyler's spring coils the balance between flexibility and resilience would have to be optimized to render Seyler's spring capable of Applicant's mutually-converse adjustment of loop span sizes; therefore such a mechanism of adjustment is not *inherent* in Seyler's spring.

Applicant explains at Specification ¶ [0219] some techniques to control the balance between flexibility and resilience in the filament of the cheek pouch anchor. Seyler's torsion coils 30 would have to be optimized to achieve the controlled balance between flexibility and resilience that is required to function as Applicant's cheek pouch anchor. Applicant traverses the Examiner's hypothesis that one of ordinary skill would adjust Seyler's torsion coils by mutually-converse adjustment of coil loop sizes. It is not ***necessarily*** true that Seyler's torsion coils would possess the essential balance between flexibility and resilience to enable Applicant's adjustment mechanism. The flexibility that Applicant's spring loops must have for adjustability would weaken the forcefulness of Seyler's torsion coils, thus tending to defeat Seyler's purpose to increase forcefulness by adding coils. Conversely, Applicant's spring element needs only sufficient forcefulness to expand itself as the user's jaws open, while avoiding retraction of the user's jaws, so the Seyler's additional forcefulness not only is unnecessary, it can even be undesirable.

Seyler teaches use of multiple coils to increase the forcefulness of his torsion spring. Seyler simply does not teach, or suggest, Applicant's mechanism for adjusting whole span of a spring anchor by mutually-converse adjustment of a plurality of spring loops. Therefore, combining Cameron with Seyler does not render obvious Applicant's particular claimed

mechanism for adjustment of whole spring element span size.

The Examiner may be silently presuming that the multiple loops of Seyler's spring **inherently** can be adjusted by Applicant's mechanism. If so, the Examiner errs. To invoke the inherent feature doctrine an examiner must provide evidence that descriptive matter missing from a reference is **necessarily** present in the thing described in the reference; that it may occur or be present under some circumstances is insufficient. See *MPEP 2112, subd. IV*. Where a characteristic must be achieved by optimization of a prior art device, that characteristic is not necessarily present in the prior art and therefore is not inherent. *In re Rijckaert, supra*; *In re Oelrich, supra*. See also, *Ex Parte Levy, supra*.

The addition of Seyler's torsion spring would not necessarily lead to adjustment of the whole span of either Cameron's spring element or Liou's spring element. Indeed, there is no obvious reason why one of ordinary skill would be motivated to increase the whole span of either Cameron's retractor or Liou's device. This is because Cameron's retractor and Liou's device both are stabilized by engaging the patient's teeth.

The only motivation to adjust the whole span of the spring element is provided by Applicant's conception, which is to form a spring that is capable of expanding and contracting within the user's cheek pouch so as to maintain a bridge across the gap between a user's upper and lower teeth, **without compressing or stabilizing the spring with the teeth**.

It would be counter-productive in a cheek pouch anchor to combine Seyler's torsion spring with Cameron or Liou, if done according to Seyler's teaching. This is because Seyler's teaches use of his coils to increase **the forcefulness** of a spring. Adding Seyler's more forceful coils necessarily would make the Cameron dental retractor and the Liou palatal adjustment device even more overpowering and less functional as cheek pouch anchors.

The forcefulness of the retraction and palatal adjustment functions of Cameron and Liou is incompatible with the objectives of the cheek pouch anchor. By patentable distinction, a cheek pouch anchor avoids attachment to the teeth and must submit to compression under only the weaker force of the soft tissues in user's cheek pouch. The cheek pouch anchor has no purpose to retract the user's jaws or to force structural modifications of the user's mouth. Spec. ¶¶ [0049] - [0050].

ISSUE 11.2. Seyler's device does not anticipate or suggest the particular kind of

structural adjustability of the cheek pouch anchor that is stated in claims 36 and 39. The Examiner errs when he states,

"Applicant argues the Cameron device is not perform the identical function as Applicant's claimed invention because it is not compressible by the soft tissue of the mouth. However, this distinction is merely a choice of use of the device by the user, not a structural distinction between the devices." Final Office Action mailed January 4, 2010, p. 2:10-13.

Applicant traverses the Examiner's assertion that a physical difference in forcefulness of a spring is not structural. The lesser forcefulness of a cheek pouch anchor's spring element is a structural feature that is incompatible both with the intended retractive function of Cameron's device and with the palatal adjustment function of Liou. Cameron and Liou teach away from Applicant's solution.

The Examiner's obviousness argument does not meet the strict test of inherency for the purpose of anticipation. See *MPEP* § 2112, *subd. IV*. Where a characteristic must be achieved by optimization of a prior art device, that characteristic is not necessarily present in the prior art and therefore is not inherent. In re Rijckaert, *supra*; In re Oelrich, *supra*. The Examiner fails to make out inherency for purposes of anticipation.

The Examiner confuses the test of inherency for purposes of anticipation with the test for obviousness -- and as a result misapplies both tests. The test for inherency is that a feature ***necessarily*** is present without having to optimize the prior art device.

The very different test for obviousness includes a determination whether one of ordinary skill in the art would perceive a suggestion in Seyler, or would have a motivation, to modify the Cameron device *according to the particular structural mechanism claimed by Applicant*. Throughout, the Examiner uses the improper test of "capable" (in the sense of potentially possible) rather than the proper test of inherency, "necessarily present."

The Examiner does not make out a prima facie case for obviousness of Applicant's adjustment mechanism by merely stating that it would be within the capability of one of ordinary skill in the art to modify Cameron with Seyler. Prima facie obviousness does not arise from mere capability to act without some objective motivation for one of ordinary skill to so act. *MPEP* § 2143.01, *subd. IV*. Mere conclusory statements by the Examiner do not establish prima facie obviousness. *KSR International Co. v. Teleflex, Inc.*, 127 S. Ct. 1727,

1742, 167 L.Ed. 2d 705, 82 USPQ2d(BNA) 1385 (U.S. Sup. Ct., 2007). Mere capability of one or ordinary skill is not sufficient to establish prima facie obviousness. MPEP § 2143.01, *subd. IV*. The Examiner has not showed that one of ordinary skill in the art would have a reasonable expectation (a) of optimizing the composition of the spring element to achieve the proper balance of flexibility and resilience, and (B) successfully structuring the spring element to implement Applicant's complex mechanism of adjustment. MPEP § 2143.02.

ISSUE 11.3. A Person of Ordinary Skill Would Adjust Cameron's Device By Simple, Straightforward Bending of Cameron's Wires 5, Rather Than By The Complex Method of Adding A Plurality of Spring Coils to Enable Mutually-Converse Adjustment of Loops.

Assuming (without conceding) that some version of Seyler's torsion spring might accidentally have a suitable balance of flexibility and resilience to enable adjustment by mutually-converse adjustment of loops, still a person of ordinary skill in the art seeking to adjust the whole span of Cameron's device would be motivated to ductilely bend Cameron's device in the most simple, obvious places. That would be to adjust along Cameron's wires 5, instead of increasing forcefulness by adding Seyler's torsion spring. Such a person of ordinary skill would be motivated to avoid using complex, ductile bending of Seyler's torsion spring because such complex, ductile bending of a torsion spring would tend to cause a poorly-predictable cascade of changes in the forcefulness and the vector or force of the Cameron's device.

That same cascade of changes arising from mutually-converse adjustment of loops has little adverse effect in Applicant's cheek pouch anchor because of its balance between flexibility and resilience. This is because the cheek pouch anchor needs to retain only sufficient forcefulness to expand itself to follow the opening of a user's jaws, and it is structured to avoid the force required to retract the user's jaws open.

ISSUE 11.4. A Person of Ordinary Skill Would Adjust Liou's Device by The Simple Bending Method Suggested By Liou, Rather Than By The Complex Method of Adding A Plurality of Coils to Enable Mutually-Converse Adjustment of Spring Coils.

A person of ordinary skill would not attempt to adjust the whole span of Liou's elastic means

8 by combining Liou with Seyler's torsion spring. Combining Seyler's torsion spring with Liou's device would be especially problematic because Liou explicitly teaches adjustment of his device by changing the critical angle θ between Liou's arms 81. See Liou Fig. 3. Alteration of Liou's whole span applying Applicant's technique of mutually-converse alteration of multiple loops would alter the diameter of Liou's spring loop 8. Such alteration of the diameter of Liou's spring loop 8 would tend to change in a complex, poorly predictable way the critical vector of the force which arms 81 of Liou's palatal adjustment device must impart to the patient's teeth and jaw. Liou, col. 2: 65 - col. 3: 11, and Fig. 3. To avoid complexity in orienting and stabilizing the applied force vector, it would be much more simple, straightforward and predictable for a person of ordinary skill to bend Liou's arms 81, as Liou himself suggests. There is no need to alter the whole span of Liou's device to assure that Liou's whole span bridges the gap between occlusal surfaces of the patient's teeth as the patient's jaws open and close. This is because Liou's device is stabilized by latching barrel bands 13, 14 to the patient's teeth.

A person of ordinary skill would have no motivation to combine Liou with Seyler's torsion coils to enable Applicant's mechanism of mutually-converse adjustment of multiple loops. Why would anyone do that, absent the teaching of Applicant's disclosure? The need for such whole-span adjustment arises precisely because Applicant has eliminated all attachments to the user's teeth.

ISSUE 12. Claims 37, 38 and 43, to a cheek pouch anchor combined with a capacity to carry and release a substance in a user's mouth, Are Not Rendered Obvious by Either Cameron (US Patent 1,389,436) or Liou (U.S. Patent 6,273,713) in view of Diaz (U.S. Patent 4,041,937)?.

The Examiner's incorrect rationale is that either Cameron or Liou anticipates all elements of Applicant's cheek pouch anchor stated in claims 37, 38 and 43, but that Cameron and Liou each lacks the added element which comprises a capacity to carry and release a substance in the user's mouth. The Examiner combines Diaz (U.S. Patent 4,041,937) with Cameron or Liou only to demonstrate that additional substance-carrying-and-release capacity in prior art.

The Examiner is in error. Neither Cameron nor Liou anticipates the elements of the

cheek pouch anchor stated in claims 37, 38 and 43, for all the reasons stated with respect to Issues 1 - 6 above. Because neither Cameron nor Liou anticipates the claimed elements of the cheek pouch anchor, and Diaz does not cure this lack in Cameron and Liou, therefore the combination of either Cameron or Liou with Diaz does not render claims 37, 38 and 43 obvious.

Applicant has always conceded that there are numerous mechanisms known in the prior art to carry substances and release them in a user's mouth, including the method employed by Diaz. However, the cheek pouch anchor is novel, so the combination of the cheek pouch anchor with a capacity to carry a substance and release it in the user's mouth also is novel.

DETAILED ISSUES AND ARGUMENT CONCERNING 35 USC 112, SECOND PARAGRAPH.

ISSUE 13. Claims 37 and 44 Are Not Indefinite For Failing To Point Out and Distinctly Claim The Subject Matter Which Applicant Regards as the Invention.

The Examiner asserted this rejection in the Final Rejection mailed January 4, 2010, p. 4.

ISSUE 13.1. Claims 37 and 44 Appropriately Use the Term "Improved" And Do Distinctly Specify What Is Improved and How It Is Improved.

The Examiner argues incorrectly,

"[Claim 37] is indefinite because of the term improved. Improved has been given no special definition by Applicant and is a subjective term that is subject to each person's own definition of improved. Therefore, it is indefinite.' Office Action mailed January 4, 2010, p. 4:3-6.

Claim 37 uses the phrase "The cheek pouch anchor of claim 33, improved to dispense a substance within a user's mouth..." This is simple, common English that plainly states what the improvement is. The improvement then is structurally defined by the limitation "wherein said spring element is adapted to receive impregnation or coating with a substance which is to be released in a user's mouth." A capacity to receive impregnation or coating with a

substance is a structural limitation.

The preamble of claim 44 states, "The cheek pouch anchor of claim 33, improved to dispense a substance within a user's mouth, further comprising:"

Thus, the improvement is pointed out. The improvement then is stated in the body of the claim as follows:

"said spring element is joined with the substance which is to be released in a user's mouth."

Thus, the claim does both point out and distinctly claim the improvement. Joinder of the spring element with a substance to be released is a structural limitation.

A person of ordinary skill in the relevant art would have no difficulty understanding what in claims 37 and 44 is improved.

ISSUES CONCERNING CONSTRUCTION OF THE CLAIMS AS A WHOLE.

ISSUE 14. The Examiner Has Failed to Construe Each Claim As A Whole and To Give Weight to Each And All Claim Limitations.

When each of Applicant's claims 33 - 46 is viewed as a whole neither Cameron or Liou anticipates any of those claims as a whole.

The Examiner has contorted Cameron and Liou on an element-by-element basis trying to jam their structures "within" a user's cheek pouch. However, when one attempts to view as a whole the Examiner's various contortions of the Cameron and Liou devices, one must sever their teeth-engaging elements to fit them within a user's cheek pouch. This would render the Cameron and Liou devices unfit for their intended purposes. The Examiner then improperly substitutes his own unreasonable definitions for the definitions in Applicant's specification in an erroneous effort to read Applicant's claims on the Examiner's contorted constructions of Cameron and Liou.

ISSUE 14.1. The Simplicity of The Solution to A Problem Does Not Defeat Patentability.

When the art in question is relatively simple, as Appellant's solution is here, the opportunity to judge by hindsight is particularly tempting (see *McGinley v. Franklin Sports*,

supra, 262 F.3d at 1351), so particular awareness of that risk is important here. It still is the law under the U.S. Supreme Court's recent decision that an examiner must guard against slipping into the use of hindsight and must guard against the temptation to read into prior art the teachings of the invention in issue. *KSR International Co. v. Teleflex, Inc.*, 127 S. Ct. 1727, 1742, 167 L.Ed. 2d 705, 82 USPQ2d(BNA) 1385 (U.S. Sup. Ct., 2007).

Complexity is not a requirement for patentability. *Panduit Corporation v. Dennison Manufacturing Co.*, 810 F. 2d 1561, 1572; 1 USPQ 2d (BNA) 1593 (Fed. Cir. 1987), possibly overruled on different issue in *Cardinal Chem. Co. V. Morton Int'l.*, 508 U.S. 83, 92, *fn. 12 and 101*, 113 S. Ct. 1967. It is incorrect to hold that an invention was obvious when made, simply because the invention is simple in nature and is easily understood when described in a patent specification. Experience has shown that some of the simplest advances have been the most nonobvious. *Van Veen v. United States*, 181 Ct. Cl. 884, 891, 156 USPQ (BNA) 403 (1967).

ISSUE 15. Claim 46 is to spring means that fit wholly within a user's cheek pouch, and joiner means that fit wholly within such user's cheek pouch for attaching a work piece to said spring means; it is not anticipated by the dental retractor of Cameron or the palatal adjustment device of Liou.

The tests for equivalence of prior art to a means-plus-function claim for purposes of 35 U.S.C. § 112 are closely analogous to the tests for anticipation of an apparatus claim.

The Examiner has not made out a *prima facie* case of equivalence between Applicant's cheek pouch anchor as claimed and the device of either Cameron or Liou. *MPEP* § 2183. To be equivalent a prior art element must perform the identical function specified in the claim, in the same way, and produce substantially the same result as the corresponding element disclosed in the specification. *Kemco Sales, Inc. v. Control Papers Co.*, 208 F.3d 1352, 54 USPQ2d 1308 (Fed. Cir. 2000). Unless an element in prior art performs the identical function specified in Applicant's claim, that prior art cannot be an equivalent for the purposes of 35 U.S.C. § 112, *sixth paragraph*. *MPEP* § 2184, *subd. II*, citing *Pennwalt Corp. v. Durand-Wayland, Inc.* 833 F.2d 931, 4 USPQ2d 1737 (Fed. Cir. 1987), *cert. denied*, 484 U.S. 961 (1988).

The dental retraction device of Cameron and the palatal adjustment device of Liou do not meet these tests for equivalence. They cannot fit wholly within a user's cheek pouch because they necessarily must attach to a user's teeth outside of the user's cheek pouch.

(viii) CLAIMS APPENDIX.

Claims 1 - 32 (withdrawn from prosecution per restriction requirement).

Claim 33: (Original) A cheek pouch anchor, for placement within a user's cheek pouch to maintain positioning of a work piece in a user's mouth while a user's jaws, inter occlusal space, and lips open and close, comprising:

A spring element adapted

- to be placed within a user's cheek pouch, and
- to compress as a user's jaws close, and
- to resiliently expand so as to form and maintain a span bridging across a user's inter occlusal space and a user's lip opening formed as a user's jaws and lips open and close, and
- to receive joinder to a work piece, and

having structural strength sufficient, when joined to a work piece, to maintain placement within a user's cheek pouch while a user's lips and jaws open and close.

Claim 34: (Original) The cheek pouch anchor of claim 33 wherein said spring element is formed of at least one of the following:

- metal,
- plastic,
- resilient monofilament plastic line.

Claim 35: (Original) The cheek pouch anchor of claim 33 further comprising:

said cheek pouch anchor is joined with a conduit for a fluid, which conduit is adapted for placement at least partially in a user's cheek pouch.

Claim 36: (Original) The cheek pouch anchor of claim 33 wherein said spring element comprises:

a resilient filament

- which is configured into a plurality of connected loops, each loop having a loop span size, and

-said plurality of loops are combined to form a whole spring element with a whole spring element span size, and

- each one of said plurality of loop span sizes is mutually adjustable relative to at least one other of said loop span sizes, such that an increase or decrease in the loop span size of any one of said plurality of loops results in a converse decrease or increase in the loop span size of at least one other of said plurality of loops, thereby enabling adjustment of said whole spring element span size by said mutual adjustment within said plurality of loop span sizes.

Claim 37: (Original) The cheek pouch anchor of claim 33, improved to dispense a substance within a user's mouth, wherein said spring element is adapted to receive impregnation or coating with a substance which is to be released in a user's mouth.

Claim 38: (Original) A cheek pouch anchor, for placement within a user's cheek pouch, comprising:

A spring element adapted

- to be placed within a user's cheek pouch, and
- to compress as a user's jaws close, and
- to resiliently expand so as to form and maintain a span
 - bridging across such user's inter occlusal space as such user's jaws open, and
 - bridging across such user's lip opening formed as such user's lips open, and
- to receive impregnation or coating with a substance which is to be released within such user's mouth,

whereby said spring element is enabled to maintain its placement within a user's cheek pouch and to release such substance while such user's lips and jaws remain free to open and close.

Claim 39. (Added by amendment, May 17, 2007) An adjustable cheek pouch anchor, for placement within a user's cheek pouch to maintain positioning of a work piece in a user's mouth while a user's jaws, inter occlusal space, and lips open and close, comprising:
a spring element formed of a resilient filament

- sized to fit within a user's cheek pouch, and

- having a dynamic span

- that is resiliently expandable within a user's cheek pouch to maintain a bridge across a user's inter occlusal space and lip opening that form as a user's jaws open, and

- that is flexibly compressible to allow a user's jaws and lips to fully close while said spring element is within a user's cheek pouch, and

- capable of receiving attachment of a work piece, and

- having structural strength that is sufficient for said spring element to maintain itself, with a work piece attached to it, within a user's cheek pouch while a user's jaws open and close; and

said resilient filament

- is configured into a plurality of connected loops

- each such loop having a loop span size, and

- each such loop span size having a range of expansion and compression, and

- said plurality of connected loops form a whole spring element having a whole spring element span size, and

- said whole spring element span size having a range of expansion and compression, and

- said range of expansion and compression of least one of said loop span sizes of said plurality of connected loops is adjustable relative to at least one other of said loop span sizes, and

- said connected loops translate an adjustment in said range of expansion and compression of the loop span size of at least one of said plurality of connected loops into an adjustment in said range of expansion and compression of said whole spring element span size.

Claim 40. (Added by amendment May 17, 2007.) A cheek pouch anchor, for placement within a user's cheek pouch and releasing a substance in a user's mouth, comprising:

A spring element

sized to fit within a user's cheek pouch, and

having a dynamic span

that is resiliently expandable within a user's cheek pouch to maintain a bridge across a user's inter occlusal space and lip opening that form as a user's jaws open, and

that is flexibly compressible to allow a user's jaws and lips to fully close while said spring element is within a user's cheek pouch, and

having the capability to carry a substance, and

having structural strength that is sufficient for said spring element, while carrying the substance, to maintain itself within a user's cheek pouch while a user's jaws open and close, and

having the capability to release the some portion of the substance into the user's mouth.

Claim 41. (Added by amendment Sept. 12, 2007). A cheek pouch anchor, for placement within a user's cheek pouch to stabilize a work piece in a user's mouth, comprising:

A spring element

sized to fit within one of a user's cheek pouches, and

having a dynamic span such that

said spring element resiliently expands within one or more of a user's cheek pouches to maintain a bridge across a user's inter occlusal space and lip opening that form as a user's jaws open, and

said spring element flexibly compresses to allow a user's jaws and lips to fully close while said spring element is within one or more of a user's cheek pouches, and

having the capability to receive attachment to a work piece, and

having structural strength that is sufficient for said spring element, with a work piece attached, to maintain itself within one or more of a user's cheek pouches while a user's jaws open and close.

Claim 42. (Added by amendment Sept. 12, 2007). A cheek pouch anchor as in claim 41, further comprising:

said cheek pouch anchor is joined with a conduit for a fluid, which conduit is configured to enable placement of it at least partially in one or more of a user's cheek pouches.

Claim 43. (Added by amendment Sept. 12, 2007) A cheek pouch anchor, for placement within a user's cheek pouch and releasing a substance in a user's mouth, comprising:

A spring element

sized to fit within one of a user's cheek pouches, and

having a dynamic span such that

said spring element resiliently expands within one or more of a user's cheek pouches to maintain a bridge across a user's inter occlusal space and lip opening that form as a user's jaws open, and

said spring element flexibly compresses to allow a user's jaws and lips to fully close while said spring element is within one or more of a user's cheek pouches, and

having the capability to carry a substance, and

having structural strength that is sufficient for said spring element, while carrying the substance, to maintain itself within one or more of a user's cheek pouches while a user's jaws open and close, and

having the capability to release a portion of the substance into the user's mouth.

Claim 44. (Added by amendment Sept. 25, 2009): The cheek pouch anchor of claim 33, improved to dispense a substance within a user's mouth, further comprising:

said spring element is joined with the substance which is to be released in a user's mouth.

Claim 45. (Added by amendment Sept. 25, 2009). The cheek pouch anchor of claim 35 further comprising:

said fluid conduit has a conduit wall,

said conduit wall has at least one hole, and

said cheek pouch anchor is joined to said fluid conduit by lacing the spring element of said cheek pouch anchor through at least one hole in said conduit wall.

Claim 46. (Added by amendment September 25, 2009) A cheek pouch anchor for

placement within a user's cheek pouch to maintain positioning of a work piece in a user's mouth while a user's jaws, inter occlusal space between a user's teeth, and lips open and close, comprising:

Spring means that fit wholly within a user's cheek pouch, and

Joinder means that fit wholly within such user's cheek pouch for attaching a work piece to said spring means.

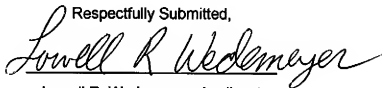
[End of Claims Appendix]

(ix) EVIDENCE APPENDIX. There is no evidence separate from the application.

(x) RELATED PROCEEDINGS APPENDIX. There are no related proceedings.

Jan 25, 2010

Respectfully Submitted,



Lowell R. Wedemeyer, Applicant

Reg. No. 32,010